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INSTITUTIONAL FOOD CONSERVATION

Suggestions Adapted to State and Public Institutions

This publication is prepared by Mr. Pitcher of the committee appointed by the United States Food Administration for study of institutional menus, large quantity cooking, elimination of waste, and methods of conservation in public and private institutions. Studies were made in public institutions in New York and Boston and were financed by the New York State Federal Food Board.

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CONTENTS.

	Page.
Foreword by Mr. Wright.....	3
General statement.....	5
Farm and garden.....	5
The utilization of farm and garden products.....	6
Purchase of food.....	7
Receiving of food.....	7
Storing of food.....	7
Distribution of foods to kitchens and dining rooms.....	7
Basic quantity ration tables.....	8
Preparation and cooking of foods.....	25
Suggestions as to dietaries.....	27
Issuing of bread and cooked food to and serving in dining rooms.....	27
(A) Bread table.....	27
(B) Instructions for use of bread table.....	28
(C) Graduated ration dippers.....	29
(D) Meat, trimming, weighing, and cooking.....	30
(E) Butter, cutting and serving.....	31
(F) Dishes, proper size for portion.....	31
Waste accounting system.....	31
How to use a waste accounting system.....	34
Record of waste.....	35
Kitchen and dining room employees.....	39

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FOREWORD.

The aim of this pamphlet is to give some concrete suggestions for food conservation in institutions. The suggestions are more especially adapted to large state and private institutions, and less to small institutions and hospital service.

Under each topic only salient points are touched upon, and only such as have a direct bearing upon food production or conservation. Some of the suggestions are already in force in many institutions; to other institutions, however, they will be of service.

Carrying out these suggestions may in some instances require additional equipment, but if that will save food the expense is justified, since economy in food is the vital factor.

The most important suggestion offered in the pamphlet is the description of a food-waste system combined with basic quantity ration tables. It is the general custom in most institutions to attempt to ascertain the relative quantity of waste food by a daily or periodic inspection of the garbage cans. These cans contain the waste from the preparation of food as well as the waste food that comes from the kitchens and dining rooms. Foods are mixed in such confusion that it is practically impossible for any observer, however experienced, to tell with any degree of accuracy the relative amounts of different articles of food contained in the garbage. This basis of judgment is so defective that no adequate regulation of food can be based upon it. If the administrative officer of an institution would know with accuracy whether the food prepared for his patients is eaten or sent to the garbage, he must in some way see that the food as it comes from the tables is classified and that the waste of each kind is gathered separately and weighed; that is, all bread would be gathered into one receptacle, all potatoes into another, etc., and reports made upon the weight of each article. When this is done, the administrative officer may know with accuracy not only the total quantity of food left over and not eaten, but also the quantity of each item. This knowledge would enable him to order either more or less of any particular article served at succeeding meals. The waste system herein described is designed to supplant by accurate means the coarse judgment of garbage-can inspection. The system has been in successful operation in one institution in New York State for eight years, and in the institutions of some States and in Canada for several years, indicating that it is practicable and serviceable. Moreover, in all cases a surprising amount of food has been saved by its introduction.

The basic quantity ration table is simply a handy computed table for the determination of the amount of food to be distributed. Too often it has been the custom in institutions to determine the

amount of food necessary for a given number of inmates, and then to allow this computation and distribution to continue for an extended period, during which the census may have materially decreased. By the use of such tables computation is obviated, and the distribution can be accurately adjusted to the census or other varying conditions day by day. To operate the waste system successfully it is necessary also to use the ration tables.

A loyal cooperating staff is necessary for the success of any institution, particularly for the operation of the kitchen and dining room. If institutions have not changed their salary and wage scale to correspond to increased war cost or intensified commercial competition it would be highly advisable to make such adjustment as would produce satisfaction and contentment on the part of the staff. Unless wages and salaries can be paid to insure interest and loyalty, it will be difficult indeed to introduce reforms or to carry out ordinary food-conservation methods.

It is highly advisable that institutions ask their respective State food authorities and agricultural colleges to put them on the mailing list for all publications dealing with institutional supplies and policies. On request the United States Food Administration will send any new matter that may be of interest to institutions.

HENRY C. WRIGHT.

GENERAL STATEMENT.

UNIVERSAL SERVICE.

The United States Food Administration has relied in its work upon the cooperation of all of our people. Food conservation and the use of substitutes for war essentials should be a universal service. Considerable saving is possible, particularly where groups are fed, since individual efforts are so promptly multiplied and visualized. Early in the war a letter was received from an inmate of one of our public institutions which said: "Even a man with a shattered mind or body ought to help some in the war." They can all help, the hundreds of thousands that are collectively fed, if those who care for them study their problems and play their part. Without detriment to individual or public health those changes in diet that help to save wheat, meat, fat, and sugar, and that prevent waste can be put into use. The more we save over here, the more we serve "over there."

It is a privilege to many a man or woman who is doing institutional work to do it in such a way that he or she can feel the thrill and joy that go with a war service.

In offering these suggestions it is fully realized that each institution has its own local problems; moreover, the administrative problems of small institutions are somewhat different from those of large institutions. Nevertheless, the suggestions offered are, in the main, applicable to institutions in different parts of the country and of varying size.

The suggestions offered are in practice in many institutions of the United States and Canada. Their practicability, therefore, has been established.

It is hoped that special effort will be made by the management of institutions to proceed with at least a majority of the offered suggestions.

The saving of food not only leaves more food for our allies but at the same time releases transportation facilities that are much needed for the transfer of war materials.

If it be realized that during the progress of the war the conservation of food by institutions is of primary and vital importance, special effort should enable the management to inaugurate most of the suggestions.

FARM AND GARDEN.

The farm and garden are a very important department of an institution in normal times, but now that as much food as possible should be produced everywhere the garden products of an institution have an increased value. Every effort should be made to increase the productivity and acreage of the land under cultivation. To do this some of the usual activities, such as grading new lawns, beautifying the grounds, and part of the industrial work should be

curtailed so as to furnish the necessary help for the farm and garden when there are crops requiring additional labor to plant or gather. This is particularly true in the gathering of crops. It is a conservative estimate that in times past there may have been losses as high as one-third in certain crops, particularly in peas, beans, and berries, on account of inability to secure help to gather the harvest. During the planting, tilling, and harvesting season other activities of the institution should be so limited that there will be plenty of help available for these purposes.

Where an institution heretofore has been planting garden crops for horse cultivation the acreage may be increased through intensive gardening; that is, planting the crops close together and tilling them with hand cultivators and hoes. This will increase the yield per acre considerably. Some of the lawns can be planted to food crops and new land can be cleared and put under cultivation.

The dairy and the piggery of an institution are very valuable. The dairy furnishes both food supplies for the institution and fertilizer for the land. The piggery makes it possible to utilize the waste (garbage) from the tables, and the meat produced obviates the necessity of purchasing pork for the general dietary. Production of pork at an institution in most instances is the most profitable industry of the farm. The temptation should not be fallen into of producing unnecessary waste to feed more pigs.

THE UTILIZATION OF FARM AND GARDEN PRODUCTS.

The utilization of farm and garden products is as important as their production. Each institution should have such equipment that food products which are not necessary for use from day to day may be stored, dehydrated, or canned for future use. Each institution should have vegetable cellars capacious enough to store properly root crops and fruits which can be kept. Institutions should be equipped with apparatus so that fruits and vegetables in season may be dehydrated or canned in quantities. Cabbage, cucumbers, green tomatoes, and string beans may be successfully preserved through what is known as the fermentation process (salting). Where there is space available for tanks, this can be more readily done by following the method used at large salting stations; that is, by using tanks of large capacity. Tanks of 250 to 3,000 gallons are best for this purpose. For string beans, cucumbers, etc., it is well to have the tanks of such size that a whole tank can be filled at one time. Cabbage can be pickled (made into sauerkraut) in tanks of 3,000 gallons or more. The use of tanks saves space and expense, since only enough barrels are then needed in which to distribute the food to the kitchen.

There will be a great loss in farm and garden crops, whether purchased or produced at the institution, unless they are properly utilized day by day. This loss will be greatest at institutions where there are farms and gardens, and it should be emphasized that crops should not be unduly forced into the dietary of an institution, but only such quantities should be used as are necessary from day to day, all the remainder being stored, dehydrated, canned, or pickled for the future.

When fresh fruits or vegetables are received at the institution, whether home grown or purchased, there will be occasions when more are brought to the storehouse than are needed. These should be

utilized with the same care as those gathered for dehydration, canning, or pickling.

PURCHASE OF FOOD.

Supplies, so far as possible, should be purchased in season. It is very important that suitable specifications be used so that competitive bids can be secured for all the principal items of food. The specifications should be so drawn that the article is carefully and accurately described and should provide that if the contractor fails to make proper deliveries the institution may make purchases in the open market and recover the difference in cost from the contractor. This can be brought about by requiring him to furnish a bond to guarantee performance of contract.

Flour, meat, milk, butter, and eggs, when purchased to cover a considerable period and therefore in large quantities, may be contracted for and the contractor required to furnish a bond. Even where these and other items of food supplies, such as cereals, sirup, molasses, sugar, etc., are bought in small quantities in the open market, competitive bids should be secured. In the purchase of fruit and vegetables it is usually not practical to make contracts, as they can be acquired on competitive bids as needed, with the exception of such root crops as can be bought in quantity.

RECEIVING FOOD.

The inspection of goods after they have been purchased and received is the next step. All goods when received should be weighed, counted, or measured. The person inspecting them should have sufficient training and knowledge of supplies to know what he is receiving, and the specifications should be so complete that he will have clear grounds for acceptance or rejection.

STORING OF FOOD.

To buy to the best advantage, storage facilities must be at hand so that meat, flour, potatoes, and sugar may be purchased in car lots, if the institution is large enough. Cereals and other supplies, not practical to buy in car lots, should be purchased in sufficient quantities to secure the wholesale price.

Refrigerating rooms cooled by mechanical means are superior to those cooled by ice, as supplies can be kept much longer and in a better state of preservation.

There should be sufficient storage space in which to store properly all perishable food as soon as received. Storerooms should be large enough so that supplies may be properly separated and classified and proper stock slips and records kept of what is on hand.

In places where cereals are likely to become infested by worms or bugs it is advisable to have the storage place scrubbed frequently, disinfected, and whitewashed; and in the summer months it is well to store cereals in refrigerated rooms, if possible.

DISTRIBUTION OF FOODS TO KITCHENS AND DINING ROOMS.

Food supplies should be issued only on requisitions.

All issues should be made by weight, count, or measure. The deliveries should be made from the storehouse to the kitchens in such a

way that the supplies will not become contaminated or deteriorate while in transit. Each place of delivery should be provided with scales for weighing the supplies as received. Suitable storage should be provided in the kitchens for a day's supply of food and for keeping small quantities of canned goods and other things which the cook needs for emergency use. Ice storage can be used in the kitchens, but it is much more satisfactory to use small mechanical refrigerating plants.

Molasses, sirup, vinegar, cereals, in fact, no food supply should be issued in original barrels or packages unless the quantity used by a kitchen for one meal will require a full original package. There is a great loss in issuing supplies in bulk, since then there is no check on the cooks. Food may be conserved by giving out all supplies in small quantities as needed.

BASIC-QUANTITY RATION TABLES.

All food supplies, so far as possible, should be issued to the kitchens and dining rooms on basic quantity ration tables.

For many years there have been tables in use for the calculation of interest, income on investments, wage tables, lumber tables, etc., which are published in different forms for convenience in making calculations. The basic-quantity ration table is the application of this idea to the issuance of food supplies to kitchens and dining rooms. Tables of this kind have been in successful use since 1911 in a number of institutions. The quantities given in the illustrative tables are those found satisfactory for institutions for the care and treatment of the insane. It would not be feasible in these suggestions to attempt to make out tables to suit all institutions. Institutions of other kinds can readily prepare tables for their own use.

To prepare a basic-quantity ration table the quantities of food being issued to kitchens and dining rooms should be tabulated, and these quantities divided by the total number of persons for whom they were issued and the total number of meals for which they were served. The final quotient will represent the per capita issue for each meal. For institutions where there are several kitchens, this plan should be followed out in computing the food supplies issued to each kitchen. When this has been done the per capita quantities issued should be set up in vertical columns so that comparisons may be made and the general average issue may be found by adding the quantities given of each of the food supplies issued to the several kitchens, and then dividing by the number of kitchens. For example:

	Per capita issue.	
	Dried beans.	Barley for soups.
	<i>Ounces.</i>	<i>Ounces.</i>
Kitchen 1.....	1.0	0.3
Kitchen 2.....	1.5	.2
Kitchen 3.....	2.0	.4
Total.....	4.5	.9
Average per capita issue.....	1.5	.3

Where there are noticeable differences between the quantity issued to a particular kitchen and the average per capita issue to all kitchens, these differences should be investigated. The next step, after computing the above, is to prepare a basic-quantity ration table for use in the institution. It may be necessary to get up several of these tables before the right quantities are arrived at. Each table may be prepared, as described above, by setting up the quantities in the same manner as indicated in specimen Table A, which shows the quantities found satisfactory for State hospitals for the insane after a number of years' experiment with different tables. The quantities given in Table A may need to be changed for inmates of institutions of a different kind; but the quantities for employees should be found sufficient for nearly all institutions.

In arriving at the proper per capita quantities per meal to be used in making the basic-quantity ration table for different classes of inmates of State and public institutions, a waste-accounting system will be found of great assistance in ascertaining whether the quantities arrived at for the table are sufficient or insufficient. Careful comparisons should be made of the waste and usable food returned from the dining rooms to the kitchens, for in this way it can be determined how nearly the tables meet the situation.

The basic-quantity ration tables are to prevent a practice quite general at institutions of fixing upon a certain quantity of food supplies to send to a kitchen, and continuing to send the same quantity without consideration of the increase or decrease in the number of persons for whom the kitchen is cooking. The basic-quantity ration tables are to insure that a proper and uniform quantity of uncooked food will be furnished to the kitchens for the number to be fed.

Table A.—A basic-quantity ration table, which appears later, is divided into a number of columns. Column 1 gives the food supplied. Column 2 the grams of protein to the pound. Column 3 the calories to the pound. Column 4 the per capita allowance per person for each meal (unless otherwise stated in the table). Columns 5 and 6 refer to the per capita allowance per person given in column 4.

From these base figures a table may be made up for the institution suited to its population, beginning with the lowest number usually present and increasing by tens or twenties. Thus the columns will be headed "50, 60, 70," or "300, 320, 340," etc. The rest is simple arithmetic. Multiply the figures in column 3 by the population figure at the head of the column, divide by 16 to reduce to pounds, and set down in the proper square the result to the nearest half pound. Each kitchen should requisition the quantity shown in the table for the number of persons nearest the number it serves, which may be varied if the waste reports show that too much or too little has been issued.

The figures in the table may be adjusted to allow the necessary range of supplies as experience indicates. As far as possible the nearest quarter, half, or three-quarters of a pound are used for convenience in making out requisitions. The storehouse, kitchens, and persons in charge of the dietary department are furnished each week with the census of the different places for which food supplies are drawn and the requisitions for the week are based on this census. It can be readily seen that after the tables have been prepared, it is as easy to order one quantity as another. As the quantity to be

ordered is governed by the census for the week, the same proportion per capita of food is supplied the kitchen month in and month out.

The dietaries should be made out one week in advance and a copy supplied to the persons in charge of the dietary arrangements of the institution. From these dietaries the cooks in charge of the kitchens should prepare their requisitions on the storehouse, using the quantities as shown by the basic-quantity ration tables. The chef and storekeeper, or their representatives, compare the quantities requisitioned with the basic-quantity ration table to see that the right quantity is called for and that the articles are in stock. It is important that the dining rooms have a copy of the dietary, so that they will know in advance what dishes to have ready for serving the meal when the food arrives from the kitchen.



TABLE A.—*Basic quantity ration table.*
ONE MEAL: BREAKFAST—PATIENTS AND EMPLOYEES.
[The figures 50 to 500 denote population.]

	Grams of protein to pound.	Calo-ries to pound.	Per capita-allow-ance in ounces.	Calories from pro-tein per capita.	Total calories per capita.	50	60	70	80	90	100	110	120	130	140	150	160	170	180
						<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>
Corn meal.....	41.73	1,635	0.7	7,3027	71,5312	2 1/2	2 1/2	3	3 3/4	4	4 1/2	4 1/2	5 1/2	5 1/2	6	6 1/2	7	7 1/2	8
Hominy.....	37.65	1,608	.7	6,5900	70,3500	2 1/2	2 1/2	3	3 3/4	4	4 1/2	4 1/2	5 1/2	5 1/2	6	6 1/2	7	7 1/2	8
Roll'd oats.....	75.75	1,800	.8	15,1497	90,0000	2 3/4	2 3/4	3 3/4	4	4 1/2	5	5	6	6 1/2	7	7 1/2	8	8 1/2	9
Wheat flakes.....	54.89	1,680	.8	10,9780	44,0000	2 3/4	2 3/4	3 3/4	4	4 1/2	5	5	6	6 1/2	7	7 1/2	8	8 1/2	9
Farina.....	49.89	1,641	.8	9,9779	82,0000	2 3/4	2 3/4	3 3/4	4	4 1/2	5	5	6	6 1/2	7	7 1/2	8	8 1/2	9
Rice.....	36.29	1,620	.8	7,2580	81,0000	2 3/4	2 3/4	3 3/4	4	4 1/2	5	5	6	6 1/2	7	7 1/2	8	8 1/2	9
ONE MEAL: DINNER—PATIENTS ONLY.																			
Barley for soup.....	38.55	1,610	0.3	2,8911	30,1875	1	1	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	2 1/2	2 1/2	2 1/2	2 1/2	3	3 1/2	3 1/2
Rice for soup.....	36.29	1,620	.3	2,7217	30,3750	1	1	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	2 1/2	2 1/2	2 1/2	2 1/2	3	3 1/2	3 1/2
Rice for puddng.....	36.29	1,620	.6	5,4430	60,7500	1	1	2	2	2 1/2	2 1/2	2 1/2	3 1/2	3 1/2	3 1/2	3 1/2	4	4 1/2	4 1/2
Hominy.....	37.65	1,608	.6	5,6174	60,3000	1	1	2	2	2 1/2	2 1/2	2 1/2	3 1/2	3 1/2	3 1/2	3 1/2	4	4 1/2	4 1/2
Crackers for soup.....	47.63	1,892	.6	7,1444	70,9500	1	1	2	2	2 1/2	2 1/2	2 1/2	3 1/2	3 1/2	3 1/2	3 1/2	4	4 1/2	4 1/2
Sago.....	1.81	1,650	.5	2,2622	51,5625	1 1/2	1 1/2	2	2	2 1/2	2 1/2	2 1/2	3 1/2	3 1/2	3 1/2	3 1/2	4	4 1/2	4 1/2
Green peas (dried) for soup.....	111.59	1,565	.5	13,9486	48,9060	1 1/2	1 1/2	2	2	2 1/2	2 1/2	2 1/2	3 1/2	3 1/2	3 1/2	3 1/2	4	4 1/2	4 1/2
Tapoca.....	1.81	1,650	.5	2,2622	51,5625	1 1/2	1 1/2	2	2	2 1/2	2 1/2	2 1/2	3 1/2	3 1/2	3 1/2	3 1/2	4	4 1/2	4 1/2
Dried split peas for soup.....	111.60	1,612	.5	13,9500	50,3750	1 1/2	1 1/2	2	2	2 1/2	2 1/2	2 1/2	3 1/2	3 1/2	3 1/2	3 1/2	4	4 1/2	4 1/2
Corn starch.....	1,632		.4	40,8000		1 1/2	1 1/2	2	2	2 1/2	2 1/2	2 1/2	3 1/2	3 1/2	3 1/2	3 1/2	4	4 1/2	4 1/2
Fresh vegetables. (See Fresh vegetable list.)																			
Roast beef.....	67.59	1,020	4	67,5888	255,0000	15	15	17 1/2	20	22 1/2	25	25	30	32 1/2	35	37 1/2	40	42 1/2	45
Roast mutton.....	66.68	1,136	4	66,6800	284,0000	12 1/2	15	17 1/2	20	22 1/2	25	25	30	32 1/2	35	37 1/2	40	42 1/2	45
Boiling beef (shanks).....	43.55	391	5	54,4360	122,1875	15 1/2	15 1/2	20	25	28 1/2	31 1/2	31 1/2	35	37 1/2	40	42 1/2	45	50	56 1/2
Corned beef (barrel).....	64.86	1,245	5	81,0750	389,0625	15 1/2	15 1/2	20	25	28 1/2	31 1/2	31 1/2	35	37 1/2	40	42 1/2	45	50	56 1/2
Roast pork (fresh).....	58.51	1,348	5	73,1375	418,1250	15 1/2	15 1/2	20	25	28 1/2	31 1/2	31 1/2	35	37 1/2	40	42 1/2	45	50	56 1/2
Fresh fish, dressed, heads off.....	38.56	205	5	48,2000	64,0625	15 1/2	15 1/2	20	25	28 1/2	31 1/2	31 1/2	35	37 1/2	40	42 1/2	45	50	56 1/2
Beef stew (meats).....	68.50	515	3	51,3750	96,5625	9 1/2	11 1/2	13 1/2	15	16 1/2	18 1/2	18 1/2	22 1/2	24 1/2	26 1/2	28 1/2	30	31 1/2	33 1/2
Mutton stew.....	68.68	1,136	3	50,0100	213,0000	9 1/2	11 1/2	13 1/2	15	16 1/2	18 1/2	18 1/2	22 1/2	24 1/2	26 1/2	28 1/2	30	31 1/2	33 1/2
Frankfurters.....	88.91	1,155	3	66,6825	216,5625	9 1/2	11 1/2	13 1/2	15	16 1/2	18 1/2	18 1/2	22 1/2	24 1/2	26 1/2	28 1/2	30	31 1/2	33 1/2
Hamburger roast.....	68.50	515	3	51,3750	96,5625	9 1/2	11 1/2	13 1/2	15	16 1/2	18 1/2	18 1/2	22 1/2	24 1/2	26 1/2	28 1/2	30	31 1/2	33 1/2
Sauerkraut.....	7.94	144	7	5,9550	27,0000	9 1/2	11 1/2	13 1/2	15	16 1/2	18 1/2	18 1/2	22 1/2	24 1/2	26 1/2	28 1/2	30	31 1/2	33 1/2
Farina.....	49.89	1,641	1.5	71,7837	142,5000	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2	14	15	16	16 1/2
Beans, dried, dried.....	102.06	1,520	1.5	38,2725	142,5000	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2	14	15	16	16 1/2
Potatoes, (See Fresh vegetable list.)	82.10	1,586	1.5	30,7875	148,6875	4 1/2	5 1/2	6 1/2	7 1/2	8 1/2	9 1/2	10 1/2	11 1/2	12 1/2	13 1/2	14	15	16	16 1/2
Canned vegetables. (See Canned vegetable list.)																			
Salt fish. (See Salt fish list.)																			
Salt pork (barrel).....	8.62	3,555	5	10,7750	1,110,9875	15 1/2	15 1/2	21 1/2	25	28 1/2	31 1/2	31 1/2	37 1/2	40 1/2	43 1/2	46 1/2	50	53	56 1/2

ONE MEAL: BREAKFAST—PATIENTS AND EMPLOYEES.

	190	200	210	220	230	240	250	260	270	280	290	300	320	340	360	380	400	420	440	460	480	500
	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>
Corn meal.....	84	84	94	94	10	10½	11	11½	12	12½	13	13	14	15	16	17	18	18½	19	20	21	22
Hominy.....	84	84	94	94	10	10½	11	11½	12	12½	13	13	14	15	16	17	18	18½	19	20	21	22
Roll'd oats.....	94	10	10½	11	11½	12	12½	13	13½	14	14½	15	16	17	18	19	20	21	22	23	24	25
Wheat flakes.....	94	10	10½	11	11½	12	12½	13	13½	14	14½	15	16	17	18	19	20	21	22	23	24	25
Farina.....	94	10	10½	11	11½	12	12½	13	13½	14	14½	15	16	17	18	19	20	21	22	23	24	25
Rice.....	94	10	10½	11	11½	12	12½	13	13½	14	14½	15	16	17	18	19	20	21	22	23	24	25

ONE MEAL: DINNER—PATIENTS ONLY.

	310	320	330	340	350	360	370	380	390	400	410	420	430	440	450	460	470	480	490	500	510	520
	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>
Barley for soup.....	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Rice for soup.....	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Rice for puddng.....	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Hominy.....	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Crackers for soup.....	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Sago.....	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Green peas (dried) for soup.....	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Tapoca.....	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Dried split peas for soup.....	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Corn starch.....	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Fresh vegetables. (See Fresh vegetable list.)	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
Roast beef.....	47	50	52	55	57	60	62	65	67	70	72	75	80	85	90	95	100	105	110	115	120	125
Roast mutton.....	47	50	52	55	57	60	62	65	67	70	72	75	80	85	90	95	100	105	110	115	120	125
Boiling beef (shanks).....	59	62	65	68	71	75	78	81	84	87	90	93	100	106	112	118	125	131	137	143	150	156
Cornd beef (barrel).....	59	62	65	68	71	75	78	81	84	87	90	93	100	106	112	118	125	131	137	143	150	156
Roast pork (tosh).....	59	62	65	68	71	75	78	81	84	87	90	93	100	106	112	118	125	131	137	143	150	156
Fresh fish, dressed, heads off.....	59	62	65	68	71	75	78	81	84	87	90	93	100	106	112	118	125	131	137	143	150	156
Beef stew (necks).....	33	37	39	41	43	45	46	48	50	52	54	56	60	63	67	71	75	78	82	86	90	93
Mutton stew.....	33	37	39	41	43	45	46	48	50	52	54	56	60	63	67	71	75	78	82	86	90	93
Frankfurters.....	33	37	39	41	43	45	46	48	50	52	54	56	60	63	67	71	75	78	82	86	90	93
Hamburger roast.....	33	37	39	41	43	45	46	48	50	52	54	56	60	63	67	71	75	78	82	86	90	93
Sauerkraut.....	33	37	39	41	43	45	46	48	50	52	54	56	60	63	67	71	75	78	82	86	90	93
Farina.....	8	8	9	9	10	10½	11	11½	12	12½	13	14	15	16	17	18	19	20	21	22	23	24
Beans, dried.....	17	18	19	20	21	22	23	24	25	26	27	28	30	31	33	35	37	39	41	43	45	46
Beans, lima, dried.....	17	18	19	20	21	22	23	24	25	26	27	28	30	31	33	35	37	39	41	43	45	46
Potatoes. (See Fresh vegetable list.)	17	18	19	20	21	22	23	24	25	26	27	28	30	31	33	35	37	39	41	43	45	46
Canned vegetables. (See Canned vegetable list.)	17	18	19	20	21	22	23	24	25	26	27	28	30	31	33	35	37	39	41	43	45	46
Salt fish. (See Salt fish list.)	50	62	65	68	71	75	78	81	84	87	90	93	100	106	112	118	125	131	137	143	150	156
Salt pork (barrel).....	50	62	65	68	71	75	78	81	84	87	90	93	100	106	112	118	125	131	137	143	150	156

ONE MEAL: SUPPER—PATIENTS ONLY.

	190	200	210	220	230	240	250	260	270	280	290	300	320	340	360	380	400	420	440	460	480	500
Corn meal.....	<i>Lbs.</i> 7 7	<i>Lbs.</i> 7 7	<i>Lbs.</i> 7 7	<i>Lbs.</i> 8 1	<i>Lbs.</i> 8 8	<i>Lbs.</i> 9 9	<i>Lbs.</i> 9 9	<i>Lbs.</i> 9 9	<i>Lbs.</i> 10 1	<i>Lbs.</i> 10 1	<i>Lbs.</i> 10 1	<i>Lbs.</i> 11 1	<i>Lbs.</i> 12 1	<i>Lbs.</i> 12 1	<i>Lbs.</i> 13 1	<i>Lbs.</i> 14 1	<i>Lbs.</i> 15 1	<i>Lbs.</i> 15 1	<i>Lbs.</i> 16 1	<i>Lbs.</i> 17 1	<i>Lbs.</i> 18 1	<i>Lbs.</i> 18 1
Hominy.....	<i>Lbs.</i> 7 7	<i>Lbs.</i> 7 7	<i>Lbs.</i> 7 7	<i>Lbs.</i> 8 1	<i>Lbs.</i> 8 8	<i>Lbs.</i> 9 9	<i>Lbs.</i> 9 9	<i>Lbs.</i> 9 9	<i>Lbs.</i> 10 1	<i>Lbs.</i> 10 1	<i>Lbs.</i> 10 1	<i>Lbs.</i> 11 1	<i>Lbs.</i> 12 1	<i>Lbs.</i> 12 1	<i>Lbs.</i> 13 1	<i>Lbs.</i> 14 1	<i>Lbs.</i> 15 1	<i>Lbs.</i> 15 1	<i>Lbs.</i> 16 1	<i>Lbs.</i> 17 1	<i>Lbs.</i> 18 1	<i>Lbs.</i> 18 1
Rice.....	<i>Lbs.</i> 9 10	<i>Lbs.</i> 9 10	<i>Lbs.</i> 10 1	<i>Lbs.</i> 11 1	<i>Lbs.</i> 11 1	<i>Lbs.</i> 12 1	<i>Lbs.</i> 12 1	<i>Lbs.</i> 13 1	<i>Lbs.</i> 13 1	<i>Lbs.</i> 14 1	<i>Lbs.</i> 14 1	<i>Lbs.</i> 15 1	<i>Lbs.</i> 16 1	<i>Lbs.</i> 17 1	<i>Lbs.</i> 18 1	<i>Lbs.</i> 19 1	<i>Lbs.</i> 20 1	<i>Lbs.</i> 21 1	<i>Lbs.</i> 22 1	<i>Lbs.</i> 23 1	<i>Lbs.</i> 24 1	<i>Lbs.</i> 25 1
Crackers (soda and oyster).....	<i>Lbs.</i> 7 7	<i>Lbs.</i> 7 7	<i>Lbs.</i> 7 7	<i>Lbs.</i> 8 1	<i>Lbs.</i> 8 8	<i>Lbs.</i> 9 9	<i>Lbs.</i> 9 9	<i>Lbs.</i> 9 9	<i>Lbs.</i> 10 1	<i>Lbs.</i> 10 1	<i>Lbs.</i> 10 1	<i>Lbs.</i> 11 1	<i>Lbs.</i> 12 1	<i>Lbs.</i> 12 1	<i>Lbs.</i> 13 1	<i>Lbs.</i> 14 1	<i>Lbs.</i> 15 1	<i>Lbs.</i> 15 1	<i>Lbs.</i> 16 1	<i>Lbs.</i> 17 1	<i>Lbs.</i> 18 1	<i>Lbs.</i> 18 1
Macaroni.....	<i>Lbs.</i> 11 12	<i>Lbs.</i> 12 13	<i>Lbs.</i> 13 14	<i>Lbs.</i> 14 15	<i>Lbs.</i> 15 16	<i>Lbs.</i> 16 17	<i>Lbs.</i> 17 18	<i>Lbs.</i> 18 19	<i>Lbs.</i> 19 20	<i>Lbs.</i> 20 21	<i>Lbs.</i> 21 22	<i>Lbs.</i> 22 23	<i>Lbs.</i> 23 24	<i>Lbs.</i> 24 25	<i>Lbs.</i> 25 26	<i>Lbs.</i> 26 27	<i>Lbs.</i> 27 28	<i>Lbs.</i> 28 29	<i>Lbs.</i> 29 30	<i>Lbs.</i> 30 31	<i>Lbs.</i> 31 32	<i>Lbs.</i> 32 33
Beans, dried.....	<i>Lbs.</i> 20 21	<i>Lbs.</i> 21 22	<i>Lbs.</i> 22 23	<i>Lbs.</i> 23 24	<i>Lbs.</i> 24 25	<i>Lbs.</i> 25 26	<i>Lbs.</i> 26 27	<i>Lbs.</i> 27 28	<i>Lbs.</i> 28 29	<i>Lbs.</i> 29 30	<i>Lbs.</i> 30 31	<i>Lbs.</i> 31 32	<i>Lbs.</i> 32 33	<i>Lbs.</i> 33 34	<i>Lbs.</i> 34 35	<i>Lbs.</i> 35 36	<i>Lbs.</i> 36 37	<i>Lbs.</i> 37 38	<i>Lbs.</i> 38 39	<i>Lbs.</i> 39 40	<i>Lbs.</i> 40 41	<i>Lbs.</i> 41 42
Prunes.....	<i>Lbs.</i> 17 18	<i>Lbs.</i> 18 19	<i>Lbs.</i> 19 20	<i>Lbs.</i> 20 21	<i>Lbs.</i> 21 22	<i>Lbs.</i> 22 23	<i>Lbs.</i> 23 24	<i>Lbs.</i> 24 25	<i>Lbs.</i> 25 26	<i>Lbs.</i> 26 27	<i>Lbs.</i> 27 28	<i>Lbs.</i> 28 29	<i>Lbs.</i> 29 30	<i>Lbs.</i> 30 31	<i>Lbs.</i> 31 32	<i>Lbs.</i> 32 33	<i>Lbs.</i> 33 34	<i>Lbs.</i> 34 35	<i>Lbs.</i> 35 36	<i>Lbs.</i> 36 37	<i>Lbs.</i> 37 38	<i>Lbs.</i> 38 39
Figs.....	<i>Lbs.</i> 17 18	<i>Lbs.</i> 18 19	<i>Lbs.</i> 19 20	<i>Lbs.</i> 20 21	<i>Lbs.</i> 21 22	<i>Lbs.</i> 22 23	<i>Lbs.</i> 23 24	<i>Lbs.</i> 24 25	<i>Lbs.</i> 25 26	<i>Lbs.</i> 26 27	<i>Lbs.</i> 27 28	<i>Lbs.</i> 28 29	<i>Lbs.</i> 29 30	<i>Lbs.</i> 30 31	<i>Lbs.</i> 31 32	<i>Lbs.</i> 32 33	<i>Lbs.</i> 33 34	<i>Lbs.</i> 34 35	<i>Lbs.</i> 35 36	<i>Lbs.</i> 36 37	<i>Lbs.</i> 37 38	<i>Lbs.</i> 38 39
Apples, evaporated.....	<i>Lbs.</i> 17 18	<i>Lbs.</i> 18 19	<i>Lbs.</i> 19 20	<i>Lbs.</i> 20 21	<i>Lbs.</i> 21 22	<i>Lbs.</i> 22 23	<i>Lbs.</i> 23 24	<i>Lbs.</i> 24 25	<i>Lbs.</i> 25 26	<i>Lbs.</i> 26 27	<i>Lbs.</i> 27 28	<i>Lbs.</i> 28 29	<i>Lbs.</i> 29 30	<i>Lbs.</i> 30 31	<i>Lbs.</i> 31 32	<i>Lbs.</i> 32 33	<i>Lbs.</i> 33 34	<i>Lbs.</i> 34 35	<i>Lbs.</i> 35 36	<i>Lbs.</i> 36 37	<i>Lbs.</i> 37 38	<i>Lbs.</i> 38 39
Peaches, evaporated.....	<i>Lbs.</i> 14 15	<i>Lbs.</i> 15 16	<i>Lbs.</i> 16 17	<i>Lbs.</i> 17 18	<i>Lbs.</i> 18 19	<i>Lbs.</i> 19 20	<i>Lbs.</i> 20 21	<i>Lbs.</i> 21 22	<i>Lbs.</i> 22 23	<i>Lbs.</i> 23 24	<i>Lbs.</i> 24 25	<i>Lbs.</i> 25 26	<i>Lbs.</i> 26 27	<i>Lbs.</i> 27 28	<i>Lbs.</i> 28 29	<i>Lbs.</i> 29 30	<i>Lbs.</i> 30 31	<i>Lbs.</i> 31 32	<i>Lbs.</i> 32 33	<i>Lbs.</i> 33 34	<i>Lbs.</i> 34 35	<i>Lbs.</i> 35 36
Oysters.....	<i>No.</i> 1,140	<i>No.</i> 1,200	<i>No.</i> 1,260	<i>No.</i> 1,320	<i>No.</i> 1,380	<i>No.</i> 1,440	<i>No.</i> 1,500	<i>No.</i> 1,560	<i>No.</i> 1,620	<i>No.</i> 1,680	<i>No.</i> 1,740	<i>No.</i> 1,800	<i>No.</i> 1,920	<i>No.</i> 2,040	<i>No.</i> 2,160	<i>No.</i> 2,280	<i>No.</i> 2,400	<i>No.</i> 2,520	<i>No.</i> 2,640	<i>No.</i> 2,760	<i>No.</i> 2,880	<i>No.</i> 3,000
Clams.....	<i>No.</i> 1,140	<i>No.</i> 1,200	<i>No.</i> 1,260	<i>No.</i> 1,320	<i>No.</i> 1,380	<i>No.</i> 1,440	<i>No.</i> 1,500	<i>No.</i> 1,560	<i>No.</i> 1,620	<i>No.</i> 1,680	<i>No.</i> 1,740	<i>No.</i> 1,800	<i>No.</i> 1,920	<i>No.</i> 2,040	<i>No.</i> 2,160	<i>No.</i> 2,280	<i>No.</i> 2,400	<i>No.</i> 2,520	<i>No.</i> 2,640	<i>No.</i> 2,760	<i>No.</i> 2,880	<i>No.</i> 3,000
Salt fish. (See Salt fish list.)	<i>No.</i> 1,140	<i>No.</i> 1,200	<i>No.</i> 1,260	<i>No.</i> 1,320	<i>No.</i> 1,380	<i>No.</i> 1,440	<i>No.</i> 1,500	<i>No.</i> 1,560	<i>No.</i> 1,620	<i>No.</i> 1,680	<i>No.</i> 1,740	<i>No.</i> 1,800	<i>No.</i> 1,920	<i>No.</i> 2,040	<i>No.</i> 2,160	<i>No.</i> 2,280	<i>No.</i> 2,400	<i>No.</i> 2,520	<i>No.</i> 2,640	<i>No.</i> 2,760	<i>No.</i> 2,880	<i>No.</i> 3,000

ONE MEAL: EMPLOYEES ONLY.

	<i>Lbs.</i> 2 6	<i>Lbs.</i> 2 10	<i>Lbs.</i> 2 14	<i>Lbs.</i> 2 18	<i>Lbs.</i> 2 22	<i>Lbs.</i> 2 26	<i>Lbs.</i> 2 30	<i>Lbs.</i> 2 34	<i>Lbs.</i> 2 38	<i>Lbs.</i> 2 42	<i>Lbs.</i> 2 46	<i>Lbs.</i> 2 50	<i>Lbs.</i> 2 54	<i>Lbs.</i> 2 58	<i>Lbs.</i> 3 02	<i>Lbs.</i> 3 06	<i>Lbs.</i> 3 10	<i>Lbs.</i> 3 14	<i>Lbs.</i> 3 18	<i>Lbs.</i> 3 22	<i>Lbs.</i> 3 26	<i>Lbs.</i> 3 30
Gelatin.....	<i>Lbs.</i> 15 16	<i>Lbs.</i> 16 17	<i>Lbs.</i> 17 18	<i>Lbs.</i> 18 19	<i>Lbs.</i> 19 20	<i>Lbs.</i> 20 21	<i>Lbs.</i> 21 22	<i>Lbs.</i> 22 23	<i>Lbs.</i> 23 24	<i>Lbs.</i> 24 25	<i>Lbs.</i> 25 26	<i>Lbs.</i> 26 27	<i>Lbs.</i> 27 28	<i>Lbs.</i> 28 29	<i>Lbs.</i> 29 30	<i>Lbs.</i> 30 31	<i>Lbs.</i> 31 32	<i>Lbs.</i> 32 33	<i>Lbs.</i> 33 34	<i>Lbs.</i> 34 35	<i>Lbs.</i> 35 36	<i>Lbs.</i> 36 37
Macaroni.....	<i>Lbs.</i> 17 18	<i>Lbs.</i> 18 19	<i>Lbs.</i> 19 20	<i>Lbs.</i> 20 21	<i>Lbs.</i> 21 22	<i>Lbs.</i> 22 23	<i>Lbs.</i> 23 24	<i>Lbs.</i> 24 25	<i>Lbs.</i> 25 26	<i>Lbs.</i> 26 27	<i>Lbs.</i> 27 28	<i>Lbs.</i> 28 29	<i>Lbs.</i> 29 30	<i>Lbs.</i> 30 31	<i>Lbs.</i> 31 32	<i>Lbs.</i> 32 33	<i>Lbs.</i> 33 34	<i>Lbs.</i> 34 35	<i>Lbs.</i> 35 36	<i>Lbs.</i> 36 37	<i>Lbs.</i> 37 38	<i>Lbs.</i> 38 39
Beans, dried.....	<i>Lbs.</i> 17 18	<i>Lbs.</i> 18 19	<i>Lbs.</i> 19 20	<i>Lbs.</i> 20 21	<i>Lbs.</i> 21 22	<i>Lbs.</i> 22 23	<i>Lbs.</i> 23 24	<i>Lbs.</i> 24 25	<i>Lbs.</i> 25 26	<i>Lbs.</i> 26 27	<i>Lbs.</i> 27 28	<i>Lbs.</i> 28 29	<i>Lbs.</i> 29 30	<i>Lbs.</i> 30 31	<i>Lbs.</i> 31 32	<i>Lbs.</i> 32 33	<i>Lbs.</i> 33 34	<i>Lbs.</i> 34 35	<i>Lbs.</i> 35 36	<i>Lbs.</i> 36 37	<i>Lbs.</i> 37 38	<i>Lbs.</i> 38 39
Dried green peas (as vegetable).....	<i>Lbs.</i> 23 24	<i>Lbs.</i> 24 25	<i>Lbs.</i> 25 26	<i>Lbs.</i> 26 27	<i>Lbs.</i> 27 28	<i>Lbs.</i> 28 29	<i>Lbs.</i> 29 30	<i>Lbs.</i> 30 31	<i>Lbs.</i> 31 32	<i>Lbs.</i> 32 33	<i>Lbs.</i> 33 34	<i>Lbs.</i> 34 35	<i>Lbs.</i> 35 36	<i>Lbs.</i> 36 37	<i>Lbs.</i> 37 38	<i>Lbs.</i> 38 39	<i>Lbs.</i> 39 40	<i>Lbs.</i> 40 41	<i>Lbs.</i> 41 42	<i>Lbs.</i> 42 43	<i>Lbs.</i> 43 44	<i>Lbs.</i> 44 45
Dried split peas or green peas for soup.....	<i>Lbs.</i> 6 6	<i>Lbs.</i> 6 6	<i>Lbs.</i> 6 6	<i>Lbs.</i> 6 6	<i>Lbs.</i> 6 6	<i>Lbs.</i> 6 6	<i>Lbs.</i> 6 6	<i>Lbs.</i> 6 6	<i>Lbs.</i> 6 6	<i>Lbs.</i> 6 6	<i>Lbs.</i> 6 6	<i>Lbs.</i> 6 6	<i>Lbs.</i> 6 6	<i>Lbs.</i> 6 6	<i>Lbs.</i> 6 6	<i>Lbs.</i> 6 6	<i>Lbs.</i> 6 6	<i>Lbs.</i> 6 6	<i>Lbs.</i> 6 6	<i>Lbs.</i> 6 6	<i>Lbs.</i> 6 6	<i>Lbs.</i> 6 6
Peaches, evaporated.....	<i>Lbs.</i> 23 24	<i>Lbs.</i> 24 25	<i>Lbs.</i> 25 26	<i>Lbs.</i> 26 27	<i>Lbs.</i> 27 28	<i>Lbs.</i> 28 29	<i>Lbs.</i> 29 30	<i>Lbs.</i> 30 31	<i>Lbs.</i> 31 32	<i>Lbs.</i> 32 33	<i>Lbs.</i> 33 34	<i>Lbs.</i> 34 35	<i>Lbs.</i> 35 36	<i>Lbs.</i> 36 37	<i>Lbs.</i> 37 38	<i>Lbs.</i> 38 39	<i>Lbs.</i> 39 40	<i>Lbs.</i> 40 41	<i>Lbs.</i> 41 42	<i>Lbs.</i> 42 43	<i>Lbs.</i> 43 44	<i>Lbs.</i> 44 45
Apples, evaporated.....	<i>Lbs.</i> 23 24	<i>Lbs.</i> 24 25	<i>Lbs.</i> 25 26	<i>Lbs.</i> 26 27	<i>Lbs.</i> 27 28	<i>Lbs.</i> 28 29	<i>Lbs.</i> 29 30	<i>Lbs.</i> 30 31	<i>Lbs.</i> 31 32	<i>Lbs.</i> 32 33	<i>Lbs.</i> 33 34	<i>Lbs.</i> 34 35	<i>Lbs.</i> 35 36	<i>Lbs.</i> 36 37	<i>Lbs.</i> 37 38	<i>Lbs.</i> 38 39	<i>Lbs.</i> 39 40	<i>Lbs.</i> 40 41	<i>Lbs.</i> 41 42	<i>Lbs.</i> 42 43	<i>Lbs.</i> 43 44	<i>Lbs.</i> 44 45
Prunes.....	<i>Lbs.</i> 23 24	<i>Lbs.</i> 24 25	<i>Lbs.</i> 25 26	<i>Lbs.</i> 26 27	<i>Lbs.</i> 27 28	<i>Lbs.</i> 28 29	<i>Lbs.</i> 29 30	<i>Lbs.</i> 30 31	<i>Lbs.</i> 31 32	<i>Lbs.</i> 32 33	<i>Lbs.</i> 33 34	<i>Lbs.</i> 34 35	<i>Lbs.</i> 35 36	<i>Lbs.</i> 36 37	<i>Lbs.</i> 37 38	<i>Lbs.</i> 38 39	<i>Lbs.</i> 39 40	<i>Lbs.</i> 40 41	<i>Lbs.</i> 41 42	<i>Lbs.</i> 42 43	<i>Lbs.</i> 43 44	<i>Lbs.</i> 44 45
Eggs, 2 ounces each.....	<i>No.</i> 380	<i>No.</i> 400	<i>No.</i> 420	<i>No.</i> 440	<i>No.</i> 460	<i>No.</i> 480	<i>No.</i> 500	<i>No.</i> 520	<i>No.</i> 540	<i>No.</i> 560	<i>No.</i> 580	<i>No.</i> 600	<i>No.</i> 640	<i>No.</i> 680	<i>No.</i> 720	<i>No.</i> 760	<i>No.</i> 800	<i>No.</i> 840	<i>No.</i> 880	<i>No.</i> 920	<i>No.</i> 960	<i>No.</i> 1,000

2 4 ounces.

1 3 ounces.

ONE MEAL: EMPLOYEES ONLY—Continued.

	190	200	210	220	230	240	250	260	270	280	290	300	320	340	360	380	400	420	440	460	480	500
Lbs.	353	371	391	411	431	45	463	481	501	521	541	561	60	631	671	711	75	781	821	861	90	Lbs. 931
No.	190	200	210	220	230	240	250	260	270	280	290	300	320	340	360	380	400	420	440	460	480	No. 500
Eggs, 2 ounces each.....																						
Bacon.....	Lbs. 231	25	261	271	281	30	311	321	331	35	361	371	40	421	45	471	50	521	55	571	60	Lbs. 621
Liver.....	471	50	521	55	571	60	621	65	671	70	721	75	80	85	90	95	100	105	110	115	120	Lbs. 125
Frankfurters.....	471	50	521	55	571	60	621	65	671	70	721	75	80	85	90	95	100	105	110	115	120	Lbs. 125
Ham, smoked as purchased.....	591	621	651	681	711	75	78	811	841	871	901	931	100	1061	1121	1181	125	1311	1371	1431	150	Lbs. 1561
Eggs, 2 ounces.....	No. 190	200	210	220	230	240	250	260	270	280	290	300	320	340	360	380	400	420	440	460	480	No. 500
Canned corned beef for hash (meat).....	Lbs. 471	50	521	55	571	60	621	65	671	70	721	75	80	85	90	95	100	105	110	115	120	Lbs. 125
Fresh beef for hash (meat).....	471	50	521	55	571	60	621	65	671	70	721	75	80	85	90	95	100	105	110	115	120	Lbs. 125
Canned salmon.....	471	50	521	55	571	60	621	65	671	70	721	75	80	85	90	95	100	105	110	115	120	Lbs. 125
Roast beef.....	831	871	911	961	1001	105	1091	1131	1181	1221	1261	1311	140	1481	1571	1661	175	1831	1921	2011	210	Lbs. 2181
Roast mutton.....	831	871	911	961	1001	105	1091	1131	1181	1221	1261	1311	140	1481	1571	1661	175	1831	1921	2011	210	Lbs. 2181
Roast pork, fresh.....	95	100	105	110	115	120	125	130	135	140	145	150	160	170	180	190	200	210	220	230	240	Lbs. 250
Roast fish, dressed, heads off.....	1061	1121	1181	1231	1291	135	1401	1461	1511	1571	1631	1681	180	1911	2021	2131	225	2361	2471	2581	270	Lbs. 2811
Hamburger roast (meat).....	591	621	651	681	711	75	78	811	841	871	901	931	100	1061	1121	1181	125	1311	1371	1431	150	Lbs. 1561
Hamburger steak (meat).....	591	621	651	681	711	75	78	811	841	871	901	931	100	1061	1121	1181	125	1311	1371	1431	150	Lbs. 1561
Beef stew (meat).....	711	75	781	821	861	90	931	971	1011	105	1081	1121	120	1271	135	1421	150	1571	165	1721	180	Lbs. 1871
Mutton stew (meat).....	711	75	781	821	861	90	931	971	1011	105	1081	1121	120	1271	135	1421	150	1571	165	1721	180	Lbs. 1871
Salt fish. (See Salt fish list.).....																						
Liver.....	711	75	781	821	861	90	931	971	1011	105	1081	1121	120	1271	135	1421	150	1571	165	1721	180	Lbs. 1871
Cold meat.....	591	621	651	681	711	75	78	811	841	871	901	931	100	1061	1121	1181	125	1311	1371	1431	150	Lbs. 1561
Beef steak.....	831	871	911	961	1001	105	1091	1131	1181	1221	1261	1311	140	1481	1571	1661	175	1831	1921	2011	210	Lbs. 2181
Mutton chops.....	95	100	105	110	115	120	125	130	135	140	145	150	160	170	180	190	200	210	220	230	240	Lbs. 250
Pork chops.....	95	100	105	110	115	120	125	130	135	140	145	150	160	170	180	190	200	210	220	230	240	Lbs. 250
Ham, smoked.....	95	100	105	110	115	120	125	130	135	140	145	150	160	170	180	190	200	210	220	230	240	Lbs. 250
Potatoes. (See Fresh vegetable list.).....																						
Beets.....	91	10	101	11	111	12	121	13	131	14	141	15	16	17	18	19	20	21	22	23	24	Lbs. 25
Turnips.....	91	10	101	11	111	12	121	13	131	14	141	15	16	17	18	19	20	21	22	23	24	Lbs. 25
Tapoca.....	91	10	101	11	111	12	121	13	131	14	141	15	16	17	18	19	20	21	22	23	24	Lbs. 25
Sago.....	91	10	101	11	111	12	121	13	131	14	141	15	16	17	18	19	20	21	22	23	24	Lbs. 25
Fresh pork sausage.....	771	811	851	891	931	971	1011	1051	1091	1131	1171	1211	130	138	1461	1511	1621	1701	1781	1861	195	Lbs. 203

13 ounces.

TABLE A.—Basic quantity ration table—Continued.

ONE MEAL—WORKERS ONLY.

[The figures 50 to 500 denote population.]

	Grams of protein to pound.	Calo-ries to pound.	Per capita allowance in ounces.	Calories from protein per capita.	Total calories per capita.	50	60	70	80	90	100	110	120	130	140	150	160	170	180
Canned corned beef.....	119.30	1,270	4	119,300	317,500	12½	15	17½	20	22½	25	27½	30	32½	35	37½	40	42½	45
Canned salmon.....	98.88	915	4	98,880	228,750	12½	15	17½	20	22½	25	27½	30	32½	35	37½	40	42½	45
Canned corned beef hash (meat).....	67.59	1,020	5	84,475	318,750	15½	18½	21½	25	28½	31½	34½	37½	40½	43½	46½	50	53	56½
Salt fish. (See Salt fish list.).....	119.30	1,270	3	89,475	238,125	9½	11½	13½	15	16½	18½	20½	22½	24½	26½	28½	30	31½	33½
Canned corned beef hash (meat).....	68.50	515	3	51,375	96,562½	9½	11½	13½	15	16½	18½	20½	22½	24½	26½	28½	30	31½	33½
Beef hash (meat).....	67.59	1,020	3	50,625	191,250	9½	11½	13½	15	16½	18½	20½	22½	24½	26½	28½	30	31½	33½
Fresh beef hash (meat).....	88.91	1,155	3	66,682½	216,562½	9½	11½	13½	15	16½	18½	20½	22½	24½	26½	28½	30	31½	33½
Frankfurters.....																			

PATIENTS AND EMPLOYEES—DAILY.

Coffee.....	0.38	1½	1½	1½	2	2½	2½	3	3½	3½	4	4½			
Tea.....	.10	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Milk—fluid.....	(1)	314	Qts.	Qts.	Qts.	Qts.	Qts.	Qts.	Qts.	Qts.	Qts.	Qts.	Qts.	Qts.	Qts.
Milk—condensed.....	(3)	757	4½	5½	6	6½	7½	8½	9	9½	10½	11½	12	12½	13½
Sugar.....	1.25	1,750	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Butter.....	1.25	3,488	3½	4½	5½	6½	7½	8½	9½	10½	11½	12½	13½	14	14

ONE MEAL: FRESH VEGETABLES—PATIENTS AND EMPLOYEES (AS PURCHASED).

EMPLOYEES.

Potatoes, white.....	8.16	295	7	14,250	129,062½	22	24½	30½	35	39½	43½	48½	52½	56½	61½	65½	70	74½	78½
Potatoes, sweet.....	6.35	440	7	11,125	132,500	22	24½	30½	35	39½	43½	48½	52½	56½	61½	65½	70	74½	78½

PATIENTS.

Potatoes, white.....	8.16	295	5	10,200	92,187½	15½	18½	21½	25	28½	31½	34½	37½	40½	43½	46½	50	53	56½
Potatoes, sweet.....	6.35	440	5	7,362½	137,500	15½	18½	21½	25	28½	31½	34½	37½	40½	43½	46½	50	53	56½

ONE MEAL—WORKERS ONLY.

	190	200	210	220	230	240	250	260	270	280	290	300	320	340	360	380	400	420	440	460	480	500
Canned corned beef.....	<i>Lbs.</i> 47½	<i>Lbs.</i> 50	<i>Lbs.</i> 52½	<i>Lbs.</i> 55	<i>Lbs.</i> 57½	<i>Lbs.</i> 60	<i>Lbs.</i> 62½	<i>Lbs.</i> 65	<i>Lbs.</i> 67½	<i>Lbs.</i> 70	<i>Lbs.</i> 72½	<i>Lbs.</i> 75	<i>Lbs.</i> 80	<i>Lbs.</i> 85	<i>Lbs.</i> 90	<i>Lbs.</i> 95	<i>Lbs.</i> 100	<i>Lbs.</i> 105	<i>Lbs.</i> 110	<i>Lbs.</i> 115	<i>Lbs.</i> 120	<i>Lbs.</i> 125
Canned salmon.....	<i>Lbs.</i> 47½	<i>Lbs.</i> 50	<i>Lbs.</i> 52½	<i>Lbs.</i> 55	<i>Lbs.</i> 57½	<i>Lbs.</i> 60	<i>Lbs.</i> 62½	<i>Lbs.</i> 65	<i>Lbs.</i> 67½	<i>Lbs.</i> 70	<i>Lbs.</i> 72½	<i>Lbs.</i> 75	<i>Lbs.</i> 80	<i>Lbs.</i> 85	<i>Lbs.</i> 90	<i>Lbs.</i> 95	<i>Lbs.</i> 100	<i>Lbs.</i> 105	<i>Lbs.</i> 110	<i>Lbs.</i> 115	<i>Lbs.</i> 120	<i>Lbs.</i> 125
Cold meat.....	<i>Lbs.</i> 59½	<i>Lbs.</i> 62½	<i>Lbs.</i> 65½	<i>Lbs.</i> 68½	<i>Lbs.</i> 71½	<i>Lbs.</i> 75	<i>Lbs.</i> 78	<i>Lbs.</i> 81½	<i>Lbs.</i> 84½	<i>Lbs.</i> 87½	<i>Lbs.</i> 90½	<i>Lbs.</i> 93½	<i>Lbs.</i> 100	<i>Lbs.</i> 106½	<i>Lbs.</i> 112½	<i>Lbs.</i> 118½	<i>Lbs.</i> 125	<i>Lbs.</i> 131½	<i>Lbs.</i> 137½	<i>Lbs.</i> 143½	<i>Lbs.</i> 150	<i>Lbs.</i> 156½
Salt fish. (See Salt fish list.).....	<i>Lbs.</i> 35½	<i>Lbs.</i> 37½	<i>Lbs.</i> 39½	<i>Lbs.</i> 41½	<i>Lbs.</i> 43½	<i>Lbs.</i> 45	<i>Lbs.</i> 46½	<i>Lbs.</i> 48½	<i>Lbs.</i> 50½	<i>Lbs.</i> 52½	<i>Lbs.</i> 54½	<i>Lbs.</i> 56½	<i>Lbs.</i> 60	<i>Lbs.</i> 63½	<i>Lbs.</i> 67½	<i>Lbs.</i> 71½	<i>Lbs.</i> 75	<i>Lbs.</i> 78½	<i>Lbs.</i> 82½	<i>Lbs.</i> 86½	<i>Lbs.</i> 90	<i>Lbs.</i> 93½
Canned corned beef hash (meat).....	<i>Lbs.</i> 35½	<i>Lbs.</i> 37½	<i>Lbs.</i> 39½	<i>Lbs.</i> 41½	<i>Lbs.</i> 43½	<i>Lbs.</i> 45	<i>Lbs.</i> 46½	<i>Lbs.</i> 48½	<i>Lbs.</i> 50½	<i>Lbs.</i> 52½	<i>Lbs.</i> 54½	<i>Lbs.</i> 56½	<i>Lbs.</i> 60	<i>Lbs.</i> 63½	<i>Lbs.</i> 67½	<i>Lbs.</i> 71½	<i>Lbs.</i> 75	<i>Lbs.</i> 78½	<i>Lbs.</i> 82½	<i>Lbs.</i> 86½	<i>Lbs.</i> 90	<i>Lbs.</i> 93½
Beef stew (meat).....	<i>Lbs.</i> 35½	<i>Lbs.</i> 37½	<i>Lbs.</i> 39½	<i>Lbs.</i> 41½	<i>Lbs.</i> 43½	<i>Lbs.</i> 45	<i>Lbs.</i> 46½	<i>Lbs.</i> 48½	<i>Lbs.</i> 50½	<i>Lbs.</i> 52½	<i>Lbs.</i> 54½	<i>Lbs.</i> 56½	<i>Lbs.</i> 60	<i>Lbs.</i> 63½	<i>Lbs.</i> 67½	<i>Lbs.</i> 71½	<i>Lbs.</i> 75	<i>Lbs.</i> 78½	<i>Lbs.</i> 82½	<i>Lbs.</i> 86½	<i>Lbs.</i> 90	<i>Lbs.</i> 93½
Fresh beef hash (meat).....	<i>Lbs.</i> 35½	<i>Lbs.</i> 37½	<i>Lbs.</i> 39½	<i>Lbs.</i> 41½	<i>Lbs.</i> 43½	<i>Lbs.</i> 45	<i>Lbs.</i> 46½	<i>Lbs.</i> 48½	<i>Lbs.</i> 50½	<i>Lbs.</i> 52½	<i>Lbs.</i> 54½	<i>Lbs.</i> 56½	<i>Lbs.</i> 60	<i>Lbs.</i> 63½	<i>Lbs.</i> 67½	<i>Lbs.</i> 71½	<i>Lbs.</i> 75	<i>Lbs.</i> 78½	<i>Lbs.</i> 82½	<i>Lbs.</i> 86½	<i>Lbs.</i> 90	<i>Lbs.</i> 93½
Frankfurters.....	<i>Lbs.</i> 35½	<i>Lbs.</i> 37½	<i>Lbs.</i> 39½	<i>Lbs.</i> 41½	<i>Lbs.</i> 43½	<i>Lbs.</i> 45	<i>Lbs.</i> 46½	<i>Lbs.</i> 48½	<i>Lbs.</i> 50½	<i>Lbs.</i> 52½	<i>Lbs.</i> 54½	<i>Lbs.</i> 56½	<i>Lbs.</i> 60	<i>Lbs.</i> 63½	<i>Lbs.</i> 67½	<i>Lbs.</i> 71½	<i>Lbs.</i> 75	<i>Lbs.</i> 78½	<i>Lbs.</i> 82½	<i>Lbs.</i> 86½	<i>Lbs.</i> 90	<i>Lbs.</i> 93½

PATIENTS AND EMPLOYEES—DAILY.

	4½	5	5½	6	6½	7	7½	8½	9½	10½	11½
Coffee.....	<i>Oz.</i> 19	<i>Oz.</i> 20	<i>Oz.</i> 21	<i>Oz.</i> 22	<i>Oz.</i> 23	<i>Oz.</i> 24	<i>Oz.</i> 25	<i>Oz.</i> 26	<i>Oz.</i> 27	<i>Oz.</i> 28	<i>Oz.</i> 29
Tea.....	<i>Qts.</i> 14½	<i>Qts.</i> 15	<i>Qts.</i> 16½	<i>Qts.</i> 17½	<i>Qts.</i> 18	<i>Qts.</i> 18½	<i>Qts.</i> 19½	<i>Qts.</i> 20½	<i>Qts.</i> 21	<i>Qts.</i> 21½	<i>Qts.</i> 22½
Milk—fluid.....	<i>Lbs.</i> 14½	<i>Lbs.</i> 15½	<i>Lbs.</i> 16½	<i>Lbs.</i> 17½	<i>Lbs.</i> 18	<i>Lbs.</i> 18½	<i>Lbs.</i> 19½	<i>Lbs.</i> 20½	<i>Lbs.</i> 21	<i>Lbs.</i> 21½	<i>Lbs.</i> 22½
Milk—condensed.....	<i>Lbs.</i> 14½	<i>Lbs.</i> 15½	<i>Lbs.</i> 16½	<i>Lbs.</i> 17½	<i>Lbs.</i> 18	<i>Lbs.</i> 18½	<i>Lbs.</i> 19½	<i>Lbs.</i> 20½	<i>Lbs.</i> 21	<i>Lbs.</i> 21½	<i>Lbs.</i> 22½
Sugar.....	<i>Lbs.</i> 14½	<i>Lbs.</i> 15½	<i>Lbs.</i> 16½	<i>Lbs.</i> 17½	<i>Lbs.</i> 18	<i>Lbs.</i> 18½	<i>Lbs.</i> 19½	<i>Lbs.</i> 20½	<i>Lbs.</i> 21	<i>Lbs.</i> 21½	<i>Lbs.</i> 22½
Butter.....	<i>Lbs.</i> 14½	<i>Lbs.</i> 15½	<i>Lbs.</i> 16½	<i>Lbs.</i> 17½	<i>Lbs.</i> 18	<i>Lbs.</i> 18½	<i>Lbs.</i> 19½	<i>Lbs.</i> 20½	<i>Lbs.</i> 21	<i>Lbs.</i> 21½	<i>Lbs.</i> 22½

ONE MEAL: FRESH VEGETABLES—PATIENTS AND EMPLOYEES (AS PURCHASED).

EMPLOYEES.

	8½	9½	10½	11½	12½	13½	14½	15½	16½	17½	18½	19½	20½	21½	22½	23½	24½	25½	26½	27½	28½	29½	30½
Potatoes, white.....	<i>Qts.</i> 8½	<i>Qts.</i> 9½	<i>Qts.</i> 10½	<i>Qts.</i> 11½	<i>Qts.</i> 12½	<i>Qts.</i> 13½	<i>Qts.</i> 14½	<i>Qts.</i> 15½	<i>Qts.</i> 16½	<i>Qts.</i> 17½	<i>Qts.</i> 18½	<i>Qts.</i> 19½	<i>Qts.</i> 20½	<i>Qts.</i> 21½	<i>Qts.</i> 22½	<i>Qts.</i> 23½	<i>Qts.</i> 24½	<i>Qts.</i> 25½	<i>Qts.</i> 26½	<i>Qts.</i> 27½	<i>Qts.</i> 28½	<i>Qts.</i> 29½	<i>Qts.</i> 30½
Potatoes, sweet.....	<i>Qts.</i> 8½	<i>Qts.</i> 9½	<i>Qts.</i> 10½	<i>Qts.</i> 11½	<i>Qts.</i> 12½	<i>Qts.</i> 13½	<i>Qts.</i> 14½	<i>Qts.</i> 15½	<i>Qts.</i> 16½	<i>Qts.</i> 17½	<i>Qts.</i> 18½	<i>Qts.</i> 19½	<i>Qts.</i> 20½	<i>Qts.</i> 21½	<i>Qts.</i> 22½	<i>Qts.</i> 23½	<i>Qts.</i> 24½	<i>Qts.</i> 25½	<i>Qts.</i> 26½	<i>Qts.</i> 27½	<i>Qts.</i> 28½	<i>Qts.</i> 29½	<i>Qts.</i> 30½

PATIENTS.

	5½	6½	7½	8½	9½	10½	11½	12½	13½	14½	15½	16½	17½	18½	19½	20½	21½	22½	23½	24½	25½	26½	27½
Potatoes, white.....	<i>Qts.</i> 5½	<i>Qts.</i> 6½	<i>Qts.</i> 7½	<i>Qts.</i> 8½	<i>Qts.</i> 9½	<i>Qts.</i> 10½	<i>Qts.</i> 11½	<i>Qts.</i> 12½	<i>Qts.</i> 13½	<i>Qts.</i> 14½	<i>Qts.</i> 15½	<i>Qts.</i> 16½	<i>Qts.</i> 17½	<i>Qts.</i> 18½	<i>Qts.</i> 19½	<i>Qts.</i> 20½	<i>Qts.</i> 21½	<i>Qts.</i> 22½	<i>Qts.</i> 23½	<i>Qts.</i> 24½	<i>Qts.</i> 25½	<i>Qts.</i> 26½	<i>Qts.</i> 27½
Potatoes, sweet.....	<i>Qts.</i> 5½	<i>Qts.</i> 6½	<i>Qts.</i> 7½	<i>Qts.</i> 8½	<i>Qts.</i> 9½	<i>Qts.</i> 10½	<i>Qts.</i> 11½	<i>Qts.</i> 12½	<i>Qts.</i> 13½	<i>Qts.</i> 14½	<i>Qts.</i> 15½	<i>Qts.</i> 16½	<i>Qts.</i> 17½	<i>Qts.</i> 18½	<i>Qts.</i> 19½	<i>Qts.</i> 20½	<i>Qts.</i> 21½	<i>Qts.</i> 22½	<i>Qts.</i> 23½	<i>Qts.</i> 24½	<i>Qts.</i> 25½	<i>Qts.</i> 26½	<i>Qts.</i> 27½

1 0.4 pint or 6.4 ounces.

2 0.15 pint or 2.4 ounces.

3 1 quart of condensed milk is considered as equal to 4 quarts of fluid milk.

TABLE A.—*Basic quantity ration table—Continued.*

ONE MEAL: PATIENTS AND EMPLOYEES.

[The figures 50 to 500 denote population.]

	Grams of protein to pound.	Calo-ries to pound.	Per capita allowance in ounces.	Calories from protein per capita.	Total calories per capita.	50	60	70	80	90	100	110	120	130	140	150	160	170	180
						<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>	<i>Lbs.</i>
Turnips.....	4.08	120	7	7,1400	52,5000	22	26½	30½	35	39½	43½	48	52½	56½	61	65½	70	74½	78½
Carrots.....	4.08	159	6	6,1200	59,6250	18½	22½	26½	30	33½	37½	41½	45	48½	52½	56½	60	63½	67½
Beets.....	5.90	160	7	10,3250	70,0000	22	26½	30½	35	39½	43½	48	52½	56½	61	65½	70	74½	78½
Parsnips.....	5.90	236	7	10,3250	103,2500	22	26½	30½	35	39½	43½	48	52½	56½	61	65½	70	74½	78½
Onions.....	6.35	190	3	4,7625	35,6250	9½	11½	13½	15	16½	18½	20½	22½	24½	26½	28½	30	31½	33½
Cabbage.....	6.35	115	8	12,7000	57,5000	25	30	35	40	45	50	55	60	65	70	75	80	85	90

ONE MEAL: PATIENTS AND EMPLOYEES—(CANNED VEGETABLES).

Canned tomatoes.....	5.44	103	4	5,4400	25,7500	12½	15	17½	20	22½	25	27½	30	32½	35	37½	40	42½	45
Canned peas.....	16.33	235	3	12,2475	44,0625	9½	11½	13½	15	16½	18½	20½	22½	24½	26½	28½	30	31½	33½
Canned string beans.....	9.52	170	4	9,5200	42,5000	12½	15	17½	20	22½	25	27½	30	32½	35	37½	40	42½	45
Canned corn.....	12.70	430	3	9,5250	80,6250	9½	11½	13½	15	16½	18½	20½	22½	24½	26½	28½	30	31½	33½
Canned kidney beans.....	31.68	544	3	23,7600	102,0000	9½	11½	13½	15	16½	18½	20½	22½	24½	26½	28½	30	31½	33½

ONE MEAL: PATIENTS AND EMPLOYEES—(SALT FISH).

Codfish.....	72.58	325	5	90,7250	101,5625	15½	18½	21½	25	28½	31½	34½	37½	40½	43½	46½	50	53	56½
Codfish for codfish balls.....	72.58	325	2.5	45,3625	50,7812	7½	9½	11½	12½	14	15½	17½	18½	20½	21½	23½	25	26½	28½
Herring.....	50.80	362	5	63,5000	113,1250	15½	18½	21½	25	28½	31½	34½	37½	40½	43½	46½	50	53	56½
Mackerel.....	88.89	711	5	111,1125	222,1875	15½	18½	21½	25	28½	31½	34½	37½	40½	43½	46½	50	53	56½
Salmon, smoked.....	98.88	915	5	123,6000	285,9375	15½	18½	21½	25	28½	31½	34½	37½	40½	43½	46½	50	53	56½

ONE MEAL: PATIENTS AND EMPLOYEES.

	190	200	210	220	230	240	250	260	270	280	290	300	320	340	360	380	400	420	440	460	480	500
Turnips.....	Lbs. 87½	Lbs. 87½	Lbs. 91½	Lbs. 96½	Lbs. 100½	Lbs. 105	Lbs. 109½	Lbs. 113½	Lbs. 118½	Lbs. 122½	Lbs. 126½	Lbs. 131½	Lbs. 140	Lbs. 148½	Lbs. 157½	Lbs. 166½	Lbs. 175	Lbs. 183½	Lbs. 192½	Lbs. 201½	Lbs. 210	Lbs. 218½
Carrots.....	71½	75	78½	82½	86½	90	93½	97½	101½	105½	109½	113½	120	127½	135½	143½	150	157½	165½	173½	180	187½
Peas.....	83½	87½	91½	96½	100½	105	109½	113½	118½	122½	126½	131½	140	148½	157½	166½	175	183½	192½	201½	210	218½
Parsnips.....	83½	87½	91½	96½	100½	105	109½	113½	118½	122½	126½	131½	140	148½	157½	166½	175	183½	192½	201½	210	218½
Onions.....	35½	37½	39½	41½	43½	45	46½	48½	50½	52½	54½	56½	60	63½	67½	71½	75	78½	82½	86½	90	93½
Cabbage.....	95	100	105	110	115	120	125	130	135	140	145	150	160	170	180	190	200	210	220	230	240	250

ONE MEAL: PATIENTS AND EMPLOYEES—(CANNED VEGETABLES).

Canned tomatoes.....	47½	50	52½	55	57½	60	62½	65	67½	70	72½	75	80	85	90	95	100	105	110	115	120	125
Canned peas.....	35½	37½	39½	41½	43½	45	46½	48½	50½	52½	54½	56½	60	63½	67½	71½	75	78½	82½	86½	90	93½
Canned string beans.....	47½	50	52½	55	57½	60	62½	65	67½	70	72½	75	80	85	90	95	100	105	110	115	120	125
Canned corn.....	35½	37½	39½	41½	43½	45	46½	48½	50½	52½	54½	56½	60	63½	67½	71½	75	78½	82½	86½	90	93½
Canned kidney beans.....	35½	37½	39½	41½	43½	45	46½	48½	50½	52½	54½	56½	60	63½	67½	71½	75	78½	82½	86½	90	93½

ONE MEAL: PATIENTS AND EMPLOYEES—(SALT FISH).

Codfish.....	59½	62½	65½	68½	71½	75	78	81½	84½	87½	90½	93½	100	106½	112½	118½	125	131½	137½	143½	150	156½
Codfish for codfish balls.....	29½	31½	32½	34½	35½	37½	39	40½	42½	43½	45½	46½	50	53½	56½	59½	62½	65½	68½	71½	75	78½
Herring.....	59½	62½	65½	68½	71½	75	78	81½	84½	87½	90½	93½	100	106½	112½	118½	125	131½	137½	143½	150	156½
Mackerel.....	59½	62½	65½	68½	71½	75	78	81½	84½	87½	90½	93½	100	106½	112½	118½	125	131½	137½	143½	150	156½
Salmon, smoked.....	59½	62½	65½	68½	71½	75	78	81½	84½	87½	90½	93½	100	106½	112½	118½	125	131½	137½	143½	150	156½

TABLE A.—*Basic quantity ration table*—Continued.

MISCELLANEOUS.

[The figures 50 to 500 denote population.]

	Grams of protein to pound.	Calories to pound.	Per capita allowance in ounces.	Calories from protein per capita.	Total calories per capita.	50	60	70	80	90	100	110	120	130	140	150	160	170	180
						Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Beef carcass, fresh, average.....	67.59	1,020																	
Mutton carcass, average.....	66.68	1,136																	
Veal.....	70.76	1,557																	
Pork carcass, fresh, average.....	58.51	1,338																	
Pork, salt (barrel).....	8.62	3,555																	
Sirup (12 pounds to gallon).....		1,250	(1)		Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.
Molasses, cane (12 pounds to gallon).....		1,225	(1)		134.9999 132.2998	16 16	19 19	22 22	25 25	29 29	32 32	35 35	38 38	42 42	45 45	48 48	51 51	55 55	58 58
Bread, white, miscellaneous.....	42.18	1,174	12	126.5400	2 880.5000	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Bread, brown.....	24.48	1,026	12	73.4400	2 769.5000	37½	45	52½	60	67½	75	82½	90	97½	105	112½	120	127½	135
Bread, corn.....	35.83	1,175	12	107.4900	2 881.2500	37½	45	52½	60	67½	75	82½	90	97½	105	112½	120	127½	135
Bread, Graham.....	40.37	1,180	12	121.1000	2 885.0000	37½	45	52½	60	67½	75	82½	90	97½	105	112½	120	127½	135
Bread, rye.....	40.82	1,153	12	122.4600	2 864.7500	37½	45	52½	60	67½	75	82½	90	97½	105	112½	120	127½	135
Bread, rye and wheat.....	53.98	1,163	12	161.9400	2 872.2500	37½	45	52½	60	67½	75	82½	90	97½	105	112½	120	127½	135

MISCELLANEOUS.

	190	200	210	220	230	240	250	260	270	280	290	300	320	340	360	380	400	420	440	460	480	500
Beef carcass, fresh, average	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Mutton carcass, average	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Veal	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Pork carcass, fresh, average	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Pork, salt (barrel)	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Sirup (12 pounds to gallon)	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.	Gills.
Molasses, cane (12 pounds to gallon)	61	64	68	71	74	77	81	84	87	90	93	97	103	110	116	123	129	136	142	149	155	162
Bread, white, miscellaneous	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Bread, brown	142½	150	157½	165	172½	180	187½	195	202½	210	217½	225	240	255	270	285	300	315	330	345	360	375
Bread, corn	142½	150	157½	165	172½	180	187½	195	202½	210	217½	225	240	255	270	285	300	315	330	345	360	375
Bread, Graham	142½	150	157½	165	172½	180	187½	195	202½	210	217½	225	240	255	270	285	300	315	330	345	360	375
Bread, rye	142½	150	157½	165	172½	180	187½	195	202½	210	217½	225	240	255	270	285	300	315	330	345	360	375
Bread, rye and wheat	142½	150	157½	165	172½	180	187½	195	202½	210	217½	225	240	255	270	285	300	315	330	345	360	375

1 0.324 gill for one meal.

2 Daily.

Items should be so selected in preparing a dietary that 10 to 15 per cent of the total calories will be produced from proteins.

Whenever it is found necessary to supplement the items of Table A with additional ones, this may easily be done by ascertaining the quantity to be issued and referring to a table showing the food value of the food supply which it is wished to serve, and after this compute the quantity required for the different populations.

It is advisable for institutions to compute at least monthly the food value of the ration issued. Columns 2 and 3 of Table A are for this purpose. It is also recommended that institutions take each of their weekly dietaries and compute the proteins and calories produced by the dietary each day. Table B, which follows, is given to illustrate how this may be done. For ready reference a series of these tables may be made out to cover the different seasons of the year, so when a dietary is to be made up, the person making it will have something to guide him in its preparation. Table B is a form used by the Military Hospitals Commission of Canada in connection with their standard basic dietary ration tables.

TABLE B.—*Daily food values.*

(Regular dietary for patients of a New York State institution, Jan. 11, 1918.)

Food.	Calories from protein.	Total calories.
<i>Breakfast.</i>		
Boiled rice, 8 ounces.....	7.2580	81.0000
Sirup, 0.324 gill.....		134.9999
Bread, butter, coffee.....		
<i>Dinner.</i>		
Baked fresh fish, 5 ounces.....	48.2000	64.0625
Drippings, 0.1 ounce.....		25.5125
Potatoes, white, 5 ounces.....	10.2000	92.1875
Sauerkraut, 3 ounces.....	5.9550	27.0000
Bread.....		
Tapioca pudding, 0.5 ounce.....	.2262	51.5625
Sugar, 0.1 ounce.....		10.9375
Eggs, 0.03 ounce.....	.8913	2.3812
Milk, 0.025 pint.....	.0935	.4906
<i>Supper.</i>		
Boiled beans, 1.5 ounces.....	38.2725	142.5000
Drippings, 0.1 ounce.....		25.5125
Bread, butter, tea.....		
Daily allowance:		
Bread, white, 12 ounces.....	126.5400	880.5000
Butter, 1.25 ounces.....	14.1875	272.5000
Sugar, 1.25 ounces.....		136.7187
Milk, 0.6 pint.....	22.4400	117.7500
Total for day.....	274.2640	2,065.6154

Table B represents the regular dietary for patients of an institution for the insane. The quantities of protein and calories may seem small, but when it is considered that the bodily requirements of the patients vary largely, being from 1,500 to 3,500 calories daily, and that other food is issued to working patients and to those requiring special diet, the average daily per capita proteins and calories issued for the month would probably be from 90 to 100 grams of protein and 2,500 to 3,000 calories per person.

PREPARATION AND COOKING OF FOODS.

The preparation and cooking of foods are so intimately related that it would be difficult to differentiate between the two.

In the preparation of food it is advisable to utilize power-driven machinery where there is sufficient work to warrant it; i. e., dough mixers, dividers, molders, meat choppers, dishwashers, knife cleaners, and kitchen machines. A vegetable-peeling machine should be used if possible. Machines for bread cutting, meat slicing, and butter cutting will save much food.

The preparation of meat naturally begins in the butcher shop. The meat should be requisitioned according to the basic quantity ration tables. Beef, mutton, and pork for roasting and beef and mutton for boiling should all be weighed in the butcher shop in the usual way. Then each separate lot for each kitchen should be boned and the meat, where necessary, rolled and tied to keep it together. It is desirable to bone all meat with the exception of steak, chops, and stews. By "boning" is meant the removal of all bones from meat to be roasted or boiled so that it may be carved with a meat-slicing machine. The meat should be cut into as large pieces as it is possible to roast in the oven or in a steam roaster, for large pieces can be carved better in a slicing machine than small ones. Bones removed should be sent to the kitchens with the meat. When meat is boiled the bones may be boiled with it. It is well to roast the meat separate from the bones, which can be simmered slowly in a steam roaster or steam kettle and the juice added to that produced by roasting. These are to be used in making gravy. Where meat is boiled any excess of liquid not needed for gravy may be used for making broth or soup. It is advisable to serve soup or broth on days when boiled beef or mutton is used, so that the juices or stock from the meat and the bones may be utilized in the soup. After the bones have been stewed for the above purpose, additional nutriment may be secured by placing them in the regular stock kettle for further simmering.

For roasting meat and for baking, oven thermometers should be used. These are now manufactured for this purpose and there are booklets published by the manufacturers giving the temperatures at which certain meats should be roasted and at which it is well to carry the ovens for different kinds of baking.

It is advisable to roast meat as rare as it will be eaten, since this process alone effects a large saving. As fast as small pieces of meat are roasted they should be removed from the roaster or from the oven. Rare, medium, and well-done pieces can be obtained in this way.

Excess fat which is not needed in cooking the meat should be trimmed from it in the butcher shop before it is issued to the kitchens. A good practice is to save fat under normal conditions, but now that it is so urgently needed for war purposes especial care should be exercised to see that this is done. By this procedure a large amount can be secured for cooking purposes, which will make it possible for institutions to reduce their purchases of fats.

The use of oven thermometers will effect a saving in meat of from 3 to 10 per cent, and even as high as 20 per cent in some cases, by causing the cook to maintain the proper temperatures.

Where there is excess fat left on the meat it is decomposed by the heat in roasting, or it may be lost when the meat is boiled, unless it is carefully skimmed from the kettle. All drippings or other fat produced in cooking should be carefully saved. In each kitchen there should be a kettle set apart for the saving of fats, so after they have become too darkened for further service in foods they may be used in soap.

It is not only a waste but also a detriment to the meat to carry too high oven temperatures. The fat not only becomes decomposed but the protein of the meat becomes so hardened that it is rendered almost indigestible. Aversions on the part of persons to rare meat can be overcome by gradually cooking the meat more rare each week and in this way accustoming them to eating it so. By the proper cooking of meat, and carving it with slicers, as high a saving as 30 per cent may be made over poor cooking and hand carving. A meat slicer will bring about a material saving over the most skillful hand carving.

To prevent the meat being roasted too much, it may be weighed just before it is placed in the oven, and again after it is roasted. Roast beef and mutton should not lose in cooking more than 20 per cent in weight, and roast pork 25 to 30 per cent. Chops and steaks may be weighed before and after broiling or frying. Other meats may also be weighed to advantage before and after cooking. It may not be practicable to do this at each meal unless there is sufficient help available, but tests should be made from time to time, so as to be sure that there is no undue loss in the cooking of the meat. This weighing will save a surprising quantity.

In the preparation of wheat substitutes and desserts, milk and eggs are very necessary. As the quantities needed vary from week to week it will give more elasticity to the dietary and more satisfaction to the inmates if the institution carries a stock of milk powders and desiccated eggs. In the preparation of wheat and meat substitutes, so necessary for institutions on account of the war, the use of milk and eggs in the making of quick breads and of meat substitutes can not be overemphasized.

There are good grades of whole milk, skim milk, and buttermilk powders now in the market, and also of desiccated eggs, all of which can be used in the recipes in the same way as ordinary milk and eggs. The only difference in the food value of whole milk and skim milk is the butter fat which has been removed from the latter. With this exception the skim milk has the same food value as the whole.

Where institutions can buy whole milk, skim milk, and buttermilk locally for their usual daily needs, it is advisable to purchase a supply sufficient for drinking purposes and a small additional quantity for cooking. By this method no excess fluid milk will be on hand and used should the census be suddenly reduced. Where milk can not be purchased, the powdered milk will be found to be a valuable substitute, particularly in cooking, as there is no noticeable difference between the results obtained in cooking with either.

The use of desiccated eggs in baking and cooking reduces labor and is also more economical, since they can be purchased at a lower price than the shell eggs, because egg powder is prepared when eggs are plentiful. Both milk powders and egg powders save transportation expenses and lessen the burdens of the transportation companies. They are also a great convenience to an institution when the

regular source of supply of milk and eggs may be interfered with on account of weather conditions or inability of dealers to deliver these supplies.

To promote the conservation of vegetables there should be a dehydrating and canning plant located near the storehouse; also a central peeling room for the preparation of all the vegetables used in the institution. This room should be supplied with modern equipment for the washing and peeling of vegetables requiring peeling, and the preparation of others for use in the kitchens and for canning.

Very material savings of vegetables can be made through the centralization of peeling and other preparation and the operation of the dehydrating, canning, and pickling plant.

SUGGESTIONS AS TO DIETARIES.

Great care should be taken in arranging dietaries to see that they cover the needs of the institution. The following is important:

(a) Conceive the whole day as the unit rather than the individual meal.

(b) Endeavor to distribute the protein, fat, and carbohydrate throughout the day so that no meal will have a striking preponderance of one kind of foodstuff. For example, meat served with macaroni and cheese concentrates the protein in one meal. Potatoes with rice served as vegetables concentrates the starch, and fried potatoes with pie concentrates the fat.

(c) With the exception of a few such staples as bread, butter, and milk, try to avoid serving any food in the same form twice in the same day; serve it, preferably, only once in any form.

(d) Try to avoid serving any food which gives character to a dish twice in the same meal even in different forms. Do not, for instance, select tomato soup, fresh tomatoes, or canned tomatoes for the same meal.

(e) As the number of articles served increases, the size of each portion served should be decreased.

ISSUING OF BREAD AND COOKED FOODS TO DINING ROOMS AND SERVING IN DINING ROOMS.

The issuing of bread and cooked foods to the dining rooms and the serving are so intimately associated that they will be treated of in one division, but under separate subdivisions so far as possible.

(A) A separate bread table is given because bread is one of the most prolific sources of loss encountered in institutions. It is a practice quite general to allow the bakery to deliver on verbal orders whatever bread the kitchens and dining rooms may order. It is therefore recommended that bread be issued only on duly approved requisitions of the dining rooms, since by so doing the baker knows at the beginning of each week how much he must bake that week; and he is therefore able to regulate the baking so as to have the proper quantity of bread on hand to meet the needs of the kitchens and dining rooms. This will prevent the baking of an oversupply, which might become stale. The dining room will take better care of the bread and will give more careful supervision to the serving

of it. Elimination of the waste of bread in kitchens and dining rooms will result in a large saving in flour and other cereals.

(B) Instructions for use of the Basic-Quantity Ration Table for Bread:

To arrive at the proper amount of bread a dining room or kitchen should requisition, the quantity given in the table for the number of persons nearest to the number eating in the dining room should be used unless the quantity returned to the kitchen shows that too much has been received, in which event the next lower amount should be requisitioned.

In making requisitions the number of employees and the number of patients eating in the dining rooms should be given in the upper left-hand corner of the requisition.

Basic quantity ration table for bread, daily issue, employees and patients.

Population..... Pounds.....	20 12½	25 15½	30 18¾	35 22	40 25	45 28	50 31	55 34	60 37½	65 41	70 44	75 47	80 50
Population..... Pounds.....	85 53	90 56	95 59	100 62	105 65	110 68	115 71½	120 75	125 78½	130 82	135 84½	140 87½	.....
Population..... Pounds.....	145 91	150 94	155 97	160 100	165 103	170 106	175 109	180 112	185 115	190 118	195 121½	.....	.....
Population..... Pounds.....	200 125	205 127½	210 130	215 133	220 136	225 140	230 144	235 147	240 150	245 153½	250 157	.....	.....
Population..... Pounds.....	255 160½	260 164	265 166½	270 169	275 172	280 175	285 178½	290 182	295 185	300 187½	305 190½	.....	.....
Population..... Pounds.....	310 194	315 197	320 200	325 203	330 206	335 209	340 212	345 215	350 218	355 221½	360 225	.....	.....
Population..... Pounds.....	365 228	370 231	375 234	380 237	385 240	390 243	395 246½	400 250	405 253	410 256	415 259	.....	.....
Population..... Pounds.....	420 262½	425 265	430 269	435 272	440 275	445 278	450 281	455 284	460 288	465 291	470 294	.....	.....
Population..... Pounds.....	475 297	480 300	485 303½	490 307	495 309½	500 312½	.....	.....	.....	.....	.....	.....	.....

The above tables are based on an average issue of 10 ounces of yeast bread and quick breads per person daily. The per capita amount of bread will vary with the classes of inmates or patients. A separate table may be made for each class requiring a different per capita issue.

The bread should be cut with a bread cutter to insure uniform thickness; not too thick, but thick enough not to crumble in serving. Three-quarters of an inch will usually be found satisfactory.

In serving bread it is recommended that one slice be given out at a time. When the inmates enter the dining room it might be well to have a slice of bread beside each plate, for nearly everyone will

eat at least this much. A certain number will eat two slices, a few three, and a smaller number four; but if, as is the practice in some dining rooms, three slices are placed beside the inmate's plate at the beginning of the meal, there can be only one result—a large waste. When large loaves are baked the slices should be cut in two.

(C) Graduated ration dippers: There are many institutions now using graduated ration dippers. The photograph below shows the types:



A tinsmith can make the large dippers, Nos. 1 and 2; the ladles, Nos. 3 and 4, may be purchased at the stores of kitchen outfitters. The end of the handle of the graduated ration dipper is left open to form a socket for inserting a long wooden handle when dipping from large kettles.

Small graduated ration dipper, No. 1, at the left of the picture, is for use in the kitchen in measuring cooked cereals (oatmeal, corn meal, cornstarch, hominy, rice), baked or boiled beans, etc. Capacity, $4\frac{1}{2}$ quarts. Size of dipper, 6 by $8\frac{3}{4}$ inches, inside measurements. This dipper is for 20 rations; each graduation represents five rations. The food is measured into food boxes with the ration dipper and sent to the dining rooms.

Ladle No. 3, used with this dipper, is of $1\frac{1}{2}$ gills capacity and is known to the trade as an extra heavy No. 10. One ladleful represents a ration for one person. The ladle is for use in the dining room in serving cereals, beans, etc., as described above, and desserts of different kinds (puddings, stewed fruits, etc.) to both inmates and employees.

The large graduated ration dipper No. 2 at the right of the picture is for use in the kitchen, for measuring soups, oyster stews,

chowders, meat stew, etc. Its capacity is $6\frac{1}{2}$ quarts, and its size is $6\frac{3}{4}$ by $9\frac{3}{4}$ inches, inside measurement. This dipper is for 20 rations, each graduation on the dipper representing 5 rations. The food is measured into cans or food boxes with the ration dipper and sent to the dining rooms.

Ladle No. 4, shown in the picture, is of $2\frac{1}{2}$ gills capacity, and is for use in dining rooms in serving. One ladleful represents a ration for one person. The ladle is what is known to the trade as an extra heavy No. 12.

The large dippers shown in the photograph are made of tin and are beaded in an ordinary beading machine such as tinsmiths use for strengthening tinware. The cook, after preparing the food, instead of guessing at the quantity to be sent to the dining rooms, uses these dippers. Each week he is told the population of each of the dining rooms for which he cooks. This is put on a blackboard in the kitchen so all the persons working there may see it.

To illustrate, if there is cereal for breakfast the cook in distributing it to the several dining rooms measures it out into food boxes with the No. 1 dipper. If 90 persons be receiving their meals in the dining room, the cook should dip the No. 1 dipper four times full into the food box. The fifth time he would only fill it to the third graduation, which would make 95 rations of cereal sent to the dining room; this would be five more rations than the number of persons eating there. After the food box containing the cereal has arrived at the dining room, employees there should use their No. 3 ladles of $1\frac{1}{2}$ gills capacity and should serve one ladleful to each person. If any one should desire more than one ladleful, or what is termed a second helping, the five extra rations would probably cover such requirements. If the five extra rations were not needed, they would be returned to the kitchen to be utilized in other meals. This method is employed for each article for which the graduated ration dippers may be used. The No. 4 ladle of $2\frac{1}{2}$ gills for measuring soups, oyster stews, etc., is used in the same manner as the other. The use of the graduated ration dippers and the individual ration ladles guarantees that each inmate shall receive a uniform quantity of food, prevents waste, and reduces the work of the kitchen and dining-room employees.

(D) Meat: It is much more difficult to control the issue of cooked meat from the kitchens to the dining rooms and its service there than the issue and service of such articles as lend themselves readily to the use of graduated ration dippers. If there are enough steam roasters or ovens, a good way to control the issue of cooked meats to the dining rooms where the kitchen cooks for more than one is to weigh out the meat, when it is received from the butcher shop, into separate lots, using the basic quantity ration tables to determine the quantity each dining room should receive. After the meat is so divided it can be roasted in individual roasters, and after being carved can be sent to the dining rooms. Where there are an insufficient number of roasters or ovens, so that one can not be set aside for each dining room, the meat can be separated and numbered skewers thrust into the different pieces for each room. The numbered pieces can then be put together in one receptacle and roasted or boiled, as the case may be. When the meat is done, that belonging to each dining room can be carved separately and sent in.

Care should be taken in the dining room to see that uniform quantities are served at the first helping, for this will prevent waste and dissatisfaction among the inmates.

To demonstrate that uniform quantities had not been served in one institution, the meat just put onto the inmates' plates was weighed (by going hit and miss through the dining room) with the following results: 2 ounces, 4 ounces, 6 ounces, 7 ounces, 5 ounces, 4 ounces, 3 ounces, $4\frac{1}{2}$ ounces, 4 ounces, etc. It can be readily seen why some of the inmates would complain of not having sufficient meat and others would have too much. The one aim in every dining-room service should be to give a helping of reasonable size, and if anyone wishes more to have some in reserve.

(E) Butter: In the service of butter and butter substitutes it is the usual practice of institutions to give these to inmates only for breakfast and supper, and at noontime when meat is used to serve a gravy. In apportioning butter and butter substitutes a saving may be made if a serving machine, or butter cutter, is used and but one piece is given out at a time. The same type of serving machine should be used in cutting the butter for the officers and employees. Those cutting 48 pieces to the pound are usually found to be acceptable.

(F) Dishes: As a means to secure satisfactory dining-room service the dishes should be standardized. Each dining room should have the same type of dishes of a proper size for the tables—dishes that will hold a portion. This method of service has been followed for a number of years by many restaurants, lunch rooms, and school lunch rooms. If dishes too small are used, the inmates receive too little food. If the dishes are too large for a portion, too great quantities are served, which results in a waste of food, especially where graduated ration dippers are not in use. Institutions frequently use bowls and cups from two to three times as large as they should be.

WASTE-ACCOUNTING SYSTEMS.

Persons who have inspected garbage cans know that meat, potatoes puddings, bread, etc., that appear to have been good when they were thrown into the cans are found mixed with other garbage, and one frequently hears the statement that institutional kitchens and dining-room employees are so wasteful that a number of families could be fed from the good food thrown away.

The inspection of garbage cans will not prevent lazy or indifferent employees from throwing good food left over from meals into the cans. They know that no adequate idea can be formed of the good food in a can of garbage, even though it be dumped from the can and examined. This fact is known to all administrative officers.

Let it be assumed that the employees are efficient and that each is conscientiously doing his work; still the inspection of garbage cans is a failure, for the employees have no definite means of determining how much garbage there should be. From week to week, without attracting attention, the garbage may gradually increase in bulk. The most alert employee will not notice this increase, for the quantities will fluctuate normally from day to day.

The failure of garbage-can inspection to give satisfactory results is due to the fact that its success depends solely on the opinion

formed by the person making the inspection, who only guesses that the garbage is not excessive, and as time passes this inadequate inspection becomes lax, for there is no way of checking results through making comparisons of different kitchens.

A waste-accounting system will overcome these difficulties. The good food that has not been served is classified as "usable food," which can be utilized by kitchens.

The waste (garbage) and the good food are returned to the kitchen in separate containers to be weighed and recorded on the forms provided for that purpose.

This method of handling waste and usable food is a satisfactory way of preventing good food from being thrown out. Through its operation everything is separated and weighed, so far as it can be, before being put into the garbage. This gives a complete record of the garbage, from which comparisons can be made of the waste (garbage) of the different kitchens.

The weighing of the "waste, not usable" (garbage) is one of the means of determining whether the inmates are receiving sufficient food.

The weighing of the "usable food," which can be utilized by the kitchens (good food), is an additional means of determining whether the inmates are receiving sufficient food.

The weighing of both the good food and the waste, not usable (garbage), shows whether the inmates are receiving sufficient food, and in the event of an official inquiry with regard to the feeding, the waste records would show whether or not enough food had been served.

Some of the advantages readily recognized by administrative officers of institutions to be obtained by the use of a waste-accounting system over garbage-can inspection are the following:

With a waste-accounting system all the waste (garbage) is separated and classified under various heads; the separation and weighing of the waste gives an administrative officer very necessary information as to the garbage left after a meal; and shows conclusively when comparisons are made between a number of dining rooms whether or not a dining room is having a normal waste of food. It is a decided advantage to an administrative officer to have accurate information as to what makes up the waste (garbage) left over from each meal. Too much waste of any particular article of food will indicate that either too much has been served or the food was badly prepared or for some reason was unpalatable. It at once prompts an inquiry.

On first thought it might seem that this information would be difficult to obtain, and that a large amount of additional work would be required in kitchens and dining rooms.

This, however, has not been the case, for the experience in the use of a waste-accounting system in the New York State hospitals and other institutions has shown that this information may be obtained without increasing the number of employees. In using a waste-accounting system all the waste (garbage) is separated and classified under the various heads. The food left on the plates which can not be separated into the different kinds is recorded as "plate scraps;" the bread which has been left on the tables which

has been served is recorded as "bread;" potatoes, as "potatoes," and where boiled potatoes are served the skins are classed as "potato skins;" meat, as "meat;" vegetables, as "vegetables;" fish bones, etc., according to name. It is necessary to classify all food served and left on plates, as garbage; food remaining in the serving room or on the table unserved should not be classified with the garbage, but should be returned to the kitchens as usable food.

The separation of waste from the inmates' tables is easily made by appointing one person (an inmate, if possible) at each table to look after the collection and separation of the waste from the table onto different plates. This can be done before the inmates leave the tables. The persons who regularly bring food to the dining-room table can carry the waste to the serving room. When the waste-accounting system is well under way it is found that inmates take an interest in the separation of the waste and will do this work without any urging.

The waste-accounting system has been used with very marked results in one of the New York State hospitals since 1911, and in all of the New York State hospitals since 1917; in some institutions in the State of Pennsylvania for over five years, and in all the institutions of the Province of Ontario, Canada, since November, 1914. Such marked results have been obtained through its use that institutions have reported that they had either to decrease the number of hogs formerly kept, as there was not sufficient garbage to feed them, or to purchase feed for the hogs. The feeding of garbage to swine is a ready way of utilizing garbage, but garbage is actually an expensive hog feed. From the standpoint of economy and food conservation all unnecessary garbage should be eliminated. No garbage therefore should be allowed to result from a meal with the idea that it is not a dead loss on account of being fed to the hogs, since hog feed usually can be purchased at a much less cost than the food supplies contained in garbage.

It is reasonable to expect the following results from the use of a waste-accounting system:

It checks underissues of food to dining rooms.

It checks overissues of foods to dining rooms.

It causes dining rooms to serve food more carefully.

It prevents dining rooms from throwing a large quantity of good food into the garbage cans.

It teaches the kitchen and dining-room employees to handle food supplies in a careful and economical manner.

It gives employees an incentive to do good work, as the waste reports show which are the efficiently run kitchens and dining rooms and which are the poorly run ones.

It is beneficial to the inmates of an institution because there is a minimum of waste of food in the kitchen and dining-room operations, more care in cooking and serving, and, as the waste is lessened, more food is available for service.

If the food supplies saved through the use of a waste-accounting system are not needed to improve the dietary of the inmates, there will be a reduced expenditure for supplies.

HOW TO USE A WASTE-ACCOUNTING SYSTEM.

In places where a waste-accounting system has not been used it would be best to institute it by first weighing all waste not usable, making one entry of it under "Plate scraps" on report blanks, hereafter illustrated, and every few days, as the kitchen and dining-room employees grow more accustomed to the new order of things, subdivisions of the waste can be made until the system is in full operation.

Great care should be given to the usable food which can be utilized by the kitchens, and this should be entered on the report blanks.

If uncarved meat is sent to the dining rooms, the meat should be trimmed from the bones returned to the kitchens before the bones are placed in the stock kettle. Unless this is done there will be a large waste of meat.

When using the waste-accounting system the dining rooms, instead of dumping all the waste from the tables into one container after the meal, gather up the different food articles separately which have been served and are left over on the plates and on the tables, so far as it can be done. Where there is more than one ward served in the same dining room, the different wards gather the waste from their tables and bring it to the serving room of the dining room. The same kind of waste from the tables of the different wards is put into one container and the several containers are then sent to the kitchen to be weighed.

The food which has not been served on the tables is classified as usable and returned to the kitchen in separate containers from the serving room to be weighed and utilized again in subsequent meals. An employee in each kitchen is detailed to weigh the waste and usable food when the dining rooms bring it back to the kitchen. When a kitchen is cooking for but two or three dining rooms the additional work is of little account, but where they receive waste from several dining rooms it causes some additional work when the system is first started. After the system is in operation it causes little trouble, and the cooks prefer this method to the old way because with the old system they could not know when too much of any food was supplied to a dining room. Under a garbage-can inspection the different kinds of food left from a meal are returned to the kitchen in one receptacle into which all kinds of food has been thrown, and if a dining room receives too much or too little of any kind of food it is hard for the cook to determine this fact. With the waste-accounting system, if too much of anything is sent to the dining room it is shown after the meal when the waste and usable food is returned and weighed.

The cook, in separating the food to send the proper quantities to the different dining rooms, has to use considerable judgment, and, unless he has some way of checking the subdivision he has made of the cooked food in bulk, he is very likely to make mistakes and send too large or too small quantities. The assistance the waste accounting system gives the chef and the cooks in the accurate distribution of cooked food to the different dining rooms more than offsets the work it causes.

The waste on the tables can be collected while the inmates are waiting for the cutlery to be cleared off. This will expedite the

work considerably, as all the regular dining-room employees and inmates need to do is to carry the plates containing the collected waste into the serving room and empty them into the proper container. The use of containers of uniform size and weight for sending the waste back to the kitchens for weighing will facilitate the operation of the system.

RECORD OF WASTE.

Accurate records should be kept of the waste and usable food returned from the kitchens and the dining rooms. For this purpose a waste-report blank should be used in the kitchens, on which to record what is returned. A supply of these blanks should be placed in a suitable binder and kept in the kitchens, proper entries being made after each meal on the blank for that day.

The following specimen forms have been found satisfactory in keeping the records of a waste-accounting system:

Daily report of waste and usable food returned by dining rooms to kitchens.—This form was approved by the New York State Hospital Commission for institutions under its supervision in 1911 and has been in successful use since that time. The actual amounts of waste and usable food returned to the kitchen of one of the New York State hospitals on May 1, 1918, have been inserted on the specimen of this form which follows. These figures have been used for two reasons: First, to illustrate the manner of insertion; second, to show the waste in an institution which has used the system for some years. Another copy of this form is given to show how the daily form may be used in making a monthly summary of the waste and the usable food returned from dining rooms to kitchen. As will be noted, the form has been slightly altered so the quantities of the different kinds of waste and usable food for each day of the month are entered, and at the bottom is given the total of each kind of waste and usable food, and also the grand totals.

Following the monthly summary sheet is a comparison sheet of the waste not usable and usable food for five kitchens of this institution for the month of May, 1918, which also gives the population served and daily per capita ounces of the waste and usable food returned by the dining rooms to the kitchens.

There is also a separate comparison sheet giving the waste and usable food of the employees only.

FORM 333.

STATE OF NEW YORK—STATE HOSPITAL COMMISSION.

Daily report of waste and usable food returned by dining rooms to kitchens.

(No. 1 kitchen; May 1, 1918.)

Dining rooms.	Waste not usable (pounds).								Usable food which can be utilized by kitchens (pounds).						
	Plate scraps.	Bread.	Potato skins.	Meat.	Potatoes.	Vegetables.	Pudding.	Fish bones.	Meat.	Bones.	Bread.	Cereals.	Potatoes.	Vegetables.	
BREAKFAST.															
17.	$\frac{1}{4}$														
18.															
19.															
20.															
21.	$\frac{1}{2}$														
22.															
23.															
24.	$\frac{1}{4}$														
BA.	2	$1\frac{1}{2}$									$1\frac{1}{2}$				
BB.	3														
DINNER.															
17.	$\frac{1}{2}$														
18.	$\frac{1}{2}$														
19.	$1\frac{1}{2}$														
20.	$\frac{1}{2}$														
21.	$\frac{1}{2}$		$\frac{1}{2}$												
22.	$1\frac{1}{4}$														
23.	$\frac{1}{4}$		$\frac{1}{2}$												
24.	$\frac{1}{2}$														
BA.	7	2	4				$\frac{1}{2}$	$3\frac{1}{2}$			2				
BB.	5	2	$5\frac{1}{2}$					4			2				
SUPPER.															
17.															
18.	$\frac{1}{2}$														
19.															
20.															
21.	$\frac{1}{4}$														
22.															
23.	$\frac{1}{2}$														
24.															
BA.	$1\frac{1}{2}$	1									1				
BB.	2	$1\frac{1}{2}$									$1\frac{1}{2}$				
Total.	$30\frac{1}{2}$	9	$10\frac{1}{2}$				$\frac{1}{2}$	$7\frac{1}{2}$			9				

The waste from dining rooms should be kept separate and each kind weighed. So far as is necessary all the food sent to the dining rooms should be served so that the patients can have an opportunity to eat it. Care should be taken not to hold too much back for a second helping, for if too much is held back and not served during the meal but is returned to the kitchen unused, it will appear that too large a quantity of food has been sent to that dining room. When a dining room returns practically no waste and another dining room considerable waste it is an indication that one dining room is receiving too much and the other too little and some should be cut from one and sent to the other, and this should be done before reducing the requisitions on the storehouse to prevent deprivation of the patients. All liquids—water, coffee, tea, etc.—should be kept out of the waste.

Waste is such things as can not be again utilized by the kitchens on account of having been served on the tables in the dining rooms. Usable food is such food as has not been served on said tables. Bones from carved meats are used in stock kettle and care should be taken to keep these separate. Blank spaces are left for kitchens to list anything returned which is not covered by the printed headlines.

"Plate scraps": When removing waste from the dining-room tables to be returned to the kitchens for weighing, cereals, potato skins, meat, vegetables, etc., should be kept separate and what can not be separated should be listed by the kitchens as plate scraps.

Daily report of waste and usable food returned by dining rooms to kitchens.

(No. 1 kitchen.)

Dining rooms.		Waste not usable (pounds).								Usable food which can be utilized by kitchens (pounds).					
		Plate scraps.	Bread.	Potato skins.	Meat.	Potatoes.	Vegetables.	Pudding.	Fish bones.	Cereals.	Meat..	Bones.	Bread.	Cereals.	Potatoes.
1918															
May 1	30	9	10			$\frac{1}{2}$	$2\frac{1}{2}$	$\frac{1}{4}$	$7\frac{1}{2}$				13	9	$\frac{1}{2}$
2	28	8				$\frac{1}{2}$	$2\frac{1}{2}$							7	
3	31	14	9		1		$\frac{1}{2}$							14	$\frac{1}{2}$
4	35	9	9	$\frac{1}{2}$									30	7	
5	32	7	$8\frac{1}{2}$		1	1	$\frac{1}{2}$							7	$1\frac{1}{2}$
6	35	6	9		2								32	$7\frac{1}{2}$	1
7	32	10	10		2	$\frac{1}{2}$							32	$10\frac{1}{2}$	1
8	33	9		$\frac{1}{2}$	2								3	6	2
9	35	11	10	$1\frac{1}{2}$		1	$\frac{1}{4}$			$\frac{1}{2}$				7	1
10	32	10			$1\frac{1}{2}$				10					5	1
11	32	$8\frac{1}{2}$	8		1	1							36	$8\frac{1}{2}$	1
12	34	10	11		1	$\frac{1}{2}$	$\frac{1}{4}$						33	4	1
13	35	$8\frac{1}{2}$	11	$1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{3}{4}$							36	$9\frac{1}{2}$	$1\frac{1}{2}$
14	30	6	$9\frac{1}{2}$	$1\frac{1}{2}$	$1\frac{1}{2}$	$\frac{3}{4}$	2						$36\frac{1}{2}$	6	1
15	34	11	$8\frac{1}{2}$	$\frac{1}{2}$	1	$1\frac{1}{2}$	$\frac{1}{4}$	$10\frac{1}{2}$					11	11	1
16	33	10	3	$1\frac{1}{2}$	$2\frac{1}{2}$									10	1
17	33	$7\frac{1}{2}$	11	$1\frac{1}{2}$	$1\frac{1}{2}$									10	
18	33	$5\frac{1}{2}$	$7\frac{1}{2}$		$\frac{1}{2}$										
19	34	$11\frac{1}{2}$	4	$7\frac{1}{2}$	6	$4\frac{1}{2}$	$1\frac{1}{2}$			$3\frac{1}{2}$			31	$5\frac{1}{2}$	
20	42	$11\frac{1}{2}$	$7\frac{1}{2}$	5		2					2		$11\frac{1}{2}$	$15\frac{1}{2}$	$5\frac{1}{2}$
21	36	$8\frac{1}{2}$	$2\frac{1}{2}$		$\frac{1}{2}$								30		
22	37	$11\frac{1}{2}$	8	1			$\frac{1}{4}$						$25\frac{1}{2}$	$11\frac{1}{2}$	
23	33	$12\frac{1}{2}$	10		1	1							32	3	
24	32	$10\frac{1}{2}$	$9\frac{1}{2}$	1	2	$\frac{1}{2}$			10					$8\frac{1}{2}$	
25	32	7	$11\frac{1}{2}$											7	
26	37	$9\frac{1}{2}$	10		$2\frac{1}{2}$								35	$9\frac{1}{2}$	$1\frac{1}{2}$
27	37	$9\frac{1}{2}$	$7\frac{1}{2}$		$1\frac{1}{2}$								32	$8\frac{1}{2}$	
28	34	$12\frac{1}{2}$			3								34	$8\frac{1}{2}$	
29	33	9	$8\frac{1}{2}$		1			11					36	9	2
30	34	11	1			$\frac{1}{2}$	$\frac{1}{2}$						11	11	
31	35	$11\frac{1}{2}$		1	$3\frac{1}{2}$	$\frac{1}{2}$	$9\frac{1}{2}$							4	$3\frac{1}{2}$
Total	1,053	298	215	18	41	22	7	70	10	$2\frac{1}{2}$	550	$247\frac{1}{2}$	$3\frac{1}{2}$	29	

Total of nonusable waste, 1,734 pounds; total of usable waste, $832\frac{1}{2}$ pounds.

Waste accounting system—Comparison sheet—May, 1918.

[Weight in pounds, except last column.]

WASTE NOT USABLE.

Kitchen.	Plate scraps.	Bread.	Potato skins.	Meat.	Potatoes.	Vegetables.	Pudding.	Cereal.	Miscellaneous and fish bones.	Total.	Number of patients and employees.	Daily average.	Daily average per capita, in ounces.
No. 1.....	1,053	298	215	18	41	22	7	10	70	1,734	1,007	55.93550	0.8887
No. 2.....	1,123	.....	387	15	.....	22	7	12	168	1,734	1,045	55.93550	.8566
No. 3.....	558	151	733	15	74	59	92	97	122	1,901	1,557	61.32260	.6301
No. 4.....	439	25	316	.....	.....	.....	1	12	74	867	794	27.96770	.5635
Group 5.....	343	20	312	26	30	38	28	38	91	926	653	29.87090	.7319
Total.....	3,516	494	1,963	74	145	141	135	169	525	7,162	5,056	231.03220	.7311

USABLE FOOD.

Kitchen.	Meat.	Bones.	Bread	Cereal.	Potatoes.	Vegetables.	Miscellaneous.	Total.	Patients and employees.	Daily average.	Daily average per capita, in ounces.
No. 1.....	2	550	247	3	29	.....	.....	832½	1,007	26.85480	0.4266
No. 2.....	74	500	36	1	.....	.....	.....	611	1,045	19.70970	.3017
No. 3.....	17	1,673	.....	.....	.....	.....	4	1,694	1,557	54.64510	.5615
No. 4.....	.....	780	293	3	.....	9	2	1,087	794	35.06450	.7066
No. 5.....	12	345	3	4	10	4	14	392	653	12.64510	.3098
Total.....	105	3,848	579	11	39	13	20	4,616½	5,056	148.91940	.4713

EMPLOYEES ONLY—WASTE NOT USABLE.

Kitchen	Plate scraps.	Bread.	Potato skins.	Meat.	Potatoes.	Vegetables.	Pudding.	Cereal.	Miscellaneous and fish bones.	Total.	Em- ployees.		Daily average.	Daily average per capita, in ounces.
											Men.	Women.		
No. 3.....	168	50	45½	12½	66	23½	22	27	14	428½	132	88	13.8225	1.0053
No. 4.....	77½	.....	27½	.....	.....	.....	1	6½	9	121½	104	51	3.9274	.4054
Total.....	245¾	50	73	12½	66	23½	23	33½	23	550	236	139	17.7499	.7573

EMPLOYEES ONLY—USABLE FOOD.

Kitchen.	Meat.	Bread.	Bones.	Cereal.	Potatoes.	Vegetables.	Total.	Employees.		Daily average.	Daily average per capita, in ounces.
								Men.	Women.		
No. 3.....	12½	.....	629	.....	2	.....	641½	132	88	20.6935	1.5050
No. 4.....	.....	16¾	222	2	9	1½	251½	104	51	8.1048	.8366
Total.....	12½	16¾	851	2	9	1½	892¾	236	139	28.7983	1.2314

The weighing and the recording of the weights of the waste and the usable food are usually done by the kitchens, but in some institutions the dining rooms are required to do this. It is recommended that it be done by the kitchens, so that this work may be centralized, and the kitchens may keep a check on the dining rooms. It is also recommended that the other records (monthly summary and comparison sheets) be prepared in one of the administrative offices, from the information supplied by the daily reports of waste and usable food returned by dining rooms to kitchens.

A properly supervised dietary and the operation of a waste system will result in distinct economy. If an institution has a census of 2,000 persons it means that 6,000 meals are prepared each day. If but one ounce more of waste per person a day is thrown into the garbage than is necessary it will aggregate 125 pounds of food wasted per day; in one year the waste will be 45,625 pounds; if this waste is worth 10 cents a pound, as it may easily be, it will mean that for every 2,000 persons the institution is needlessly throwing away \$4,562.50 worth of food. The average institution is likely to save considerably over one ounce per capita per day by a well-operated waste system. After the waste system is in thorough working order, the table waste per capita from employees should not exceed 1½ ounces daily, and for inmates not more than 1 ounce. The returned usable food is usually from one-half to three-fourths as much as the waste.

KITCHEN AND DINING-ROOM EMPLOYEES.

Food is the most expensive item in the budget of institutions. Moreover, it is more easily wasted and spoiled, without the knowledge of the administrative officers, than any of the other supplies used. Not only does its misuse result in heavy financial loss, but at the same time the inmates are likely to suffer. Food in institutions and hospitals to-day is one of the chief therapeutic means of maintaining and restoring health. When food is so important from a financial and therapeutic standpoint, why should the institutional management permit it to be handled by low-paid and irresponsible employees? There is no department of an institution where high salaries will be so quickly justified as in the preparation and service of food. Institutions that have not adjusted their kitchen and dining-room wages to war conditions, to the end that competent, willing help can be secured and retained, should take this matter under immediate consideration.



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